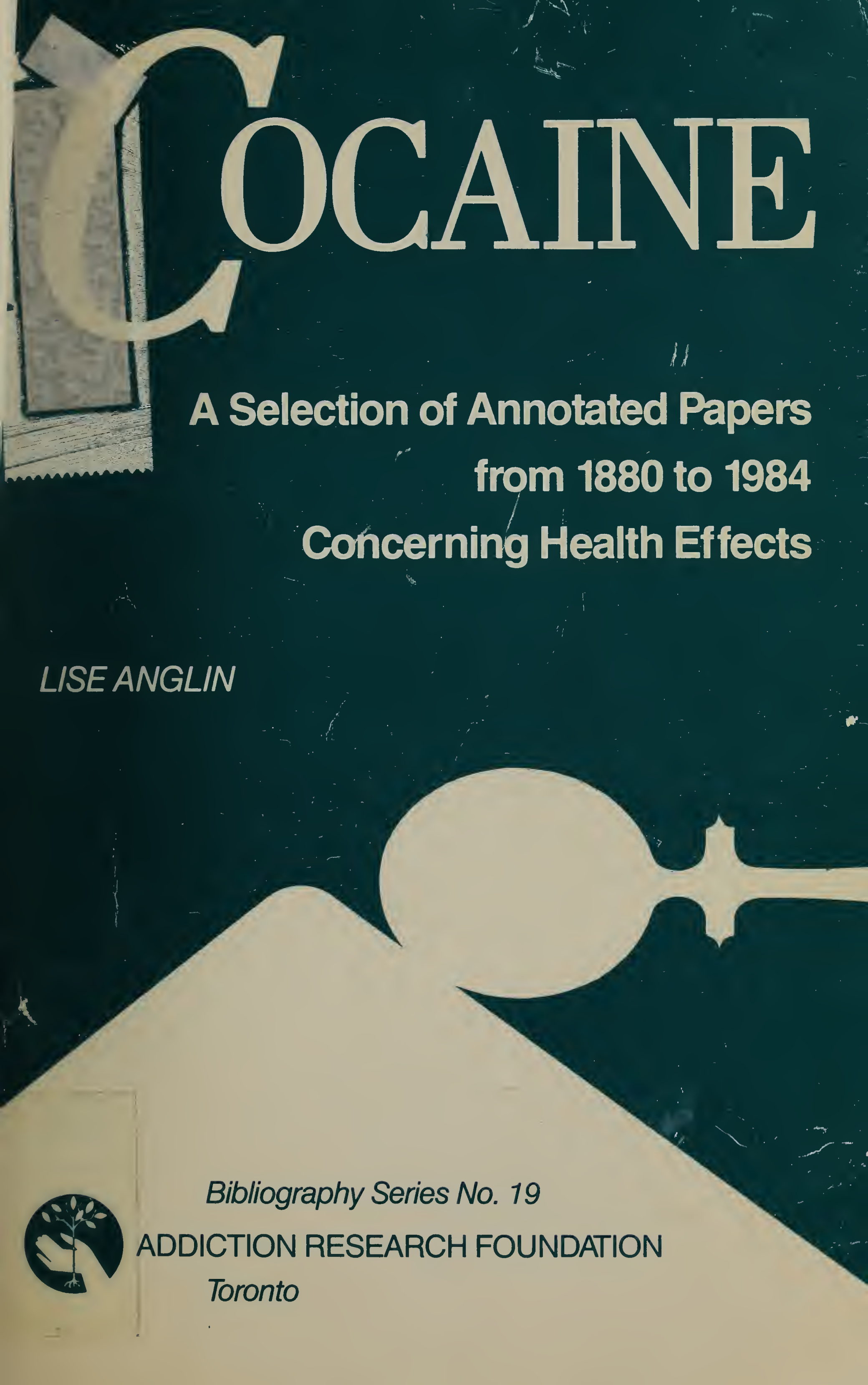
UNIVERSITY OF TORONTO
3 1761 01418416 2



COCAINE

A Selection of Annotated Papers from 1880 to 1984 Concerning Health Effects

LISE ANGLIN

Bibliography Series No. 19

ADDICTION RESEARCH FOUNDATION
Toronto

㊼

COCAINE

OTHER PUBLICATIONS IN THE
ADDICTION RESEARCH FOUNDATION BIBLIOGRAPHIC SERIES

This series is a service to individuals concerned with problems of alcohol and drug abuse. The following bibliographies are available from the Marketing Department, Addiction Research Foundation, 33 Russell Street, Toronto, Canada M5S 2S1.

No. 3	Interaction of Alcohol and Other Drugs Second Edition Revised	(1972)
No. 3a	Interaction of Alcohol and Other Drugs Supplement 1	(1973)
No. 4	Non-Alcoholic Drugs and Personality: A Selected Annotated Bibliography	(1972)
No. 7	Drug Use and Driving	(1974)
No. 8	Amphetamines and Related Drugs: Clinical Toxicity and Dependence. A Comprehensive Bibliography of International Literature	(1974)
No. 9	The Benzodiazepines--Patterns of Use	(1975)
No. 10	Behavior Modification for the Treatment of Alcoholism	(1975)
No. 11	Women and Psychoactive Drug Use: An Interim Annotated Bibliography	(1975)
No. 12	Therapeutic Communities for the Management of Addictions: A Critically Annotated Bibliography	(1976)
No. 13	The Ethical Pharmaceutical Industry and Some of Its Economic Aspects	(1977)
No. 14	Disulfiram in the Treatment of Alcoholism	(1978)
No. 15	Alcohol Use and World Cultures	(1981)
No. 16	Cannabis: Health Risks. A Comprehensive Annotated Bibliography (1844-1982)	(1983)
No. 17	Occupational Alcoholism: An Annotated Bibliography	(1984)
No. 18	Studies of Drinking in Public Places: An Annotated Bibliography	(1985)

COCAINE

A Selection of Annotated Papers from 1880 to 1984 Concerning Health Effects

Lise Anglin

Bibliographic Series No. 19

Addiction Research Foundation
Toronto, Ontario, Canada

LIBRARY
FEB 6 1986
UNIVERSITY OF TORONTO

No part of this book may be reproduced in any form--except for a brief quotation (not to exceed 1,000 words) in a review or professional work--without permission in writing from the publisher.

Canadian Cataloguing in Publication Data

Anglin, Lise, 1953-
  Cocaine bibliography

(Bibliographic series, ISSN 0065-1885 ; no. 19)
Includes indexes.
ISBN 0-88868-114-3

1. Cocaine - Physiological effect - Bibliography.
2. Cocaine - Bibliography. I. Addiction Research
Foundation of Ontario. II. Title. III. Series:
Bibliographic series (Addiction Research Foundation
of Ontario) ; no. 19.

Z6663.C63A53 1985 016.615'785 C85-099801-8

Copyright © 1985 by the Alcoholism and Drug Addiction Research Foundation, Toronto. All rights reserved. Printed and bound in Canada.

For Gustave J. Yaki,
The great Canadian naturalist,
Who has always encouraged me to write.

TABLE OF CONTENTS

	Page
ntroduction	ix
cknowledgements	xiii
lossary of Frequently Used Medical Terms	xv
ist of Abbreviations Used in the Text	xvii
ist of Abbreviations Used in Key Word Lists	xix
elected List of Book-Length Works on Cocaine	xxv
ibliography	1
uthor Index	185
ubject Index	191

INTRODUCTION

The Addiction Research Foundation has a collection of papers on cocaine now numbering about 600. It was decided in the winter of 1984 that one of the best ways to make this material available to Foundation staff and others was to record it in a bibliography. Hence the present publication.

The scope of the bibliography has been limited to English, French, and German papers dealing with health effects of recreational use. Other matters such as history, chemistry and botany may be mentioned in passing, and are included in the key words and subject index, but are not discussed at length in the annotations. Therapeutic administration is considered relevant to health effects of recreational use, especially when adverse effects have occurred. As many of the late nineteenth century publications indicate, recreational use often used to be a product of therapeutic use in the first place.

Some authors believe that the chewing of coca leaves, as practiced in South America, bears little comparison to the snorting of street cocaine for fun, as practiced in North America. However, others argue that the two practices result in similar effects and that in both cases the operant psychoactive ingredient is cocaine. Therefore, a sample of papers has been included dealing mainly with coca chewing to give the reader at least an idea of what the controversy is all about.

Completely excluded were papers solely on pharmacokinetics chemistry, animal experiments, botany and law. We realize tha in a way all these subjects do relate to health effects, bu chose to stick to papers which we judged to have the greates interest and readability for our target audience, namely, al workers in addictions and health care facilities, includin researchers, doctors and counsellors, as well as concerne parents, students, teachers and other laymen. Thus, thi bibliography is fairly modest in size and does not pretend to b comprehensive, but should give a good overview of the importan cocaine literature concerning health effects and provide portable mini-library on the subject.

The annotations are non-evaluative. Whatever the author(s) said is recorded in summary form, without comment or editing. If important information such as dose administered is missing in the original paper, it will be missing in the annotation. If extreme opinions are expressed in the original, they will be stated in the annotation. There has been no attempt to influence the reader's perception of the quality of the article in question.

Most of the papers have appeared in scientific journals, but several have been published as book chapters or separate reports. A search through the Addiction Research Foundation and University of Toronto libraries revealed no comparable, recent bibliography on cocaine. We also checked with the National Institute on Drug Abuse, the World Health Organization, the United Nations Division of Narcotic Drugs, and the Department of National Health and

Welfare, Canada, to ensure that this publication would not duplicate any earlier one.

Both the key words and subject index are designed to help the reader find his topic of interest with precision and speed. In some cases, a key word will not appear in the annotation itself but will occur in the original paper. In other cases, the key word will appear in neither the annotation nor the original paper, but will represent a concept which is discussed without being referred to by name. For example, an author may state that the patient did not survive; this fact would be represented by the key word "death." As a general rule, one assumes that bibliographies are not read in sequence from cover to cover, but are scanned as reference tools to find out quickly who said what about what and when. For this reason we considered it worthwhile to include both key-word lists above each annotation and a thorough subject index at the end of the book.

Beyond these few remarks, there is probably little need to belabour the point of how the bibliography is organized or how it can best be used. Undoubtedly most readers have had experience with this sort of book in the past. Above all, it is to be hoped that these pages will provide a handy and enjoyable way to become familiar with what the experts have said about cocaine.

L.A.

P.S. Please note that numbers used in the Author and Subject Indexes refer to the citation rather than the page number. Underscoring of citation numbers denotes senior authorship.

ACKNOWLEDGEMENTS

I wish to thank Dr. R. Smart of Prevention Studies for initiating this project, and for his confidence in my ability to see it through. His advice and suggestions have been very constructive, and in all respects he has been most generous, helpful and kind.

Thanks are also owing to Mrs. Deborah J. Lindholm for her excellent typing of the initial draft, and for her cooperation in such tasks as proofreading, photocopying and filing. Above and beyond the call of duty, she also assisted in the copy-editing of the final draft.

GLOSSARY OF FREQUENTLY USED MEDICAL TERMS
(According to Stedman's Medical Dictionary, 24th Edition)

alkaloid	- vegetable base, usually found in the leaf, bark, seed, or other parts of a plant
anorexia	- diminished appetite; aversion to food
aphrodisiac	- increasing sexual desire
cardiac arrest	- a loss of effective cardiac function, which results in cessation of circulation
cardiac arrhythmia	- irregularity of heart beat
cardiac dysrhythmia	- any abnormality in the rate, regularity or sequence of cardiac function (*cf.* cardiac arrhythmia)
cardiovascular	- relating to the heart and the blood vessels or the circulation
drachm	- about .389 gram
dysphoria	- a feeling of unpleasantness or discomfort
euphoria	- a feeling of well-being, commonly exaggerated and not necessarily well founded
grain	- about .0648 gram
hallucination	- the apparent, often strong subjective perception of an object or event when no such situation is present
auditory	- of the sense of hearing
gustatory	- of taste
olfactory	- of smell
tactile	- of touch
visual	- of sight
hypertension	- high blood pressure
hyperthermia	- induced high fever
mydriasis	- dilation of the pupil

pallor	- paleness, as of skin
paranoia	- a severe but rare mental disorder characterized by the presence of systematized delusions, often of a persecutory character, in an otherwise intact personality
psychosis	- a mental disorder causing gross distortion or disorganization of a person's mental capacity, affective response, and capacity to recognize reality
respiratory arrest	- stoppage of the functioning of the respiratory system
schizophrenia	- the most common type of psychosis, characterized by a disorder in the thinking processes, such as delusions and hallucinations, and extensive withdrawal of the individual's interest from other people and the outside world
syncope	- a sudden fall of blood pressure, possibly resulting in loss of consciousness
tachycardia	- rapid beating of the heart
tolerance	- the ability to endure or be less responsive to a stimulus, especially over a period of continued exposure
toxicity	- the state of being poisonous

LIST OF ABBREVIATIONS USED IN THE TEXT

ad lib	ad libitum
a.m.	before noon
AMA	American Medical Association
ARF	Addiction Research Foundation of Ontario
°C	degrees Celsius
CNS	central nervous system
CO	carbon monoxide
Co.	company
CO_2	carbon dioxide
ed(s)	editor(s)
EEG	electroencephalogram
EKG	electrocardiogram
Fre	French
g	gram
Ger	German
hr	hour
i.m.	intramuscular
IOP	intraocular pressure
i.p.	intraperitoneal
IQ	intelligence quotient
i.v.	intravenous
JAMA	Journal of the American Medical Association
kg	kilogram(s)
km	kilometre(s)
LSD	lysergic acid diethylamide
Ltd.	limited
mg	milligram(s)
min	minute(s)
MMPI	Minnesota Multiphasic Personality Inventory
mo	month
NIDA	National Institute on Drug Abuse
O_2	oxygen
%	per cent
p.m.	after noon
Pubs.	publishers
S(s)	experimental subject(s)
sec	second(s)
UK	United Kingdom
US(A)	United States (of America)
WAIS	Wechsler Adult Intelligence Scale
WHO	World Health Organization
wk	week(s)
yr	year(s)

LIST OF ABREVIATIONS USED IN KEY WORD LISTS
(Unless Explained Elsewhere)

abnor. behav.	abnormal behaviour
abst.	abstract
adoles.	adolescent
age eff.	effect of age of subject(s) on reaction to cocaine
aggress. behav.	aggressive behaviour
amph.	amphetamines
anesth.	anesthetic
anticonvuls.	anticonvulsant
antidepress.	antidepressant
aud. halluc.	auditory hallucination
autops.	autopsy
barb.	barbiturates
behav.	behaviour
biotransform.	biotransformation
bk. rev.	book review
bl.	blood
blood press.	blood pressure
bl. vess.	blood vessel
body percep.	subject's perception of his body (as affected by cocaine use)
body temp.	body temperature
body wt.	body weight
bot.	botany
bradycard.	bradycardia
caff.	caffeine
card. arrest	cardiac arrest

card. arrhyth.	cardiac arrhythmia
cardiovasc.	cardiovascular
case rep.	case report
cell. resp.	cellular respiration
cereb. ed.	cerebral edema
chem.	chemistry
clin. pap.	clinical paper
coc. crystals	cocaine crystals
coc. flakes	cocaine flakes
coc. mud	cocaine mud
cognit.	cognition
concent.	concentration
constip.	constipation
convuls.	convulsion
crim. behav.	criminal behaviour
cross tol.	cross tolerance
dev. abnorm.	developmental abnormality
diarrh.	diarrhea
diaz.	diazepam
disinhib.	disinhibition
dose/resp.	dose/response
dr. comp.	comparison of cocaine with (amphetami morphine, etc.)
dr. int.	interaction between cocaine and (hero opium, etc.)
dr. tr.	pharmacological treatment of adve reaction to cocaine with (propanolol, etc.
E.	English
epidem.	epidemiology

epineph.	epinephrine
Erythrox. coca	*Erythroxylon coca*
exp. admin.	experimental administration
exper. user	experienced user
F.	French
fet. death	fetal death
G.	German
gen. disc.	general discussion
g.i.	gastrointestinal
halluc.	hallucination
hemorrh.	hemorrhage
hist. of coc.	history of cocaine
homosexual.	homosexuality
hydrochl.	hydrochloride
hyperref.	hyperreflexia
hypertherm.	hyperthermia
hypoact.	hypoactivity
hypoglyc.	hypoglycemia
hypotens.	hypotension
inhal.	inhalation
inject.	injection
interper. rel.	interpersonal relationship(s)
intest.	intestine
i.v. inject.	intravenous injection
legal cont.	legal controversy
lett. ed.	letter to the editor
lt. user	light user

lung func.	lung function
morph.	morphine
motiv.	motivation
mult. drug use	multiple drug use
musc.	muscle
musc. weak.	muscular weakness
mydr.	mydriasis
narc.	narcotics
NE	norepinephrine
neurol.	neurology
neurotrans.	neurotransmitter
o.d.	overdose
olf. halluc.	olfactory hallucination
percep.	perception
personality disint.	personality disintegration
pharmacokin.	pharmacokinetics
phencycl.	phencyclidine
phys. det.	physical deterioration
physical dep.	physical dependence
prog. drug use	progressive drug use
propan.	propanolol
psych. dep.	psychological dependence
psychiat.	psychiatry
psychol.	psychology
psychomot.	psychomotor (effects)
pulm. ed.	pulmonary edema
reac. time	reaction time (i.e., time elapsed between drug intake and subject's reaction to drug)

reprod. tox.	reproductive toxicity
reserp.	reserpine
resp. depr.	respiratory depression
respir.	respiration
S. Am.	South America
sec. disc.	secondary discussion
self-admin.	self-administration
sex. behav.	sexual behaviour
sex diff.	sex differences
stim.	stimulant
stom.	stomach
strych.	strychnine
subj. change	subjective change
tachycard.	tachycardia
tact. halluc.	tactile hallucination
therap. admin.	therapeutic administration
therap. use	therapeutic use
tobac.	tobacco
top. admin.	topical administration
treatm.	treatment
Turk.	Turkey
urin. freq.	frequency of urination
vis. halluc.	visual hallucination
vocaliz.	vocalization
wt. gain	weight gain
wt. loss	weight loss
y. adult	young adult

SELECTED LIST OF BOOK-LENGTH WORKS ON COCAINE

Ashley, R. *Cocaine - Its History, Uses and Effects*. New York: St. Martin's Press, pp. 232, 1975.

Byck, R. (ed.). *Cocaine Papers: Sigmund Freud (Notes on the Freud Papers by Anna Freud)*. New York: New American Library, pp. 401, 1974.

Edminster, S. and Hammond, W. (Translators). *The Cocaine Papers* (by Sigmund Freud). Vienna: Dunquin Press, 1963.

Ellinwood, E.H., Jr. and Kilbey, M.M. (eds.). *Cocaine and Other Stimulants*. New York: Plenum Press, pp. 721, 1977.

Grinspoon, L. and Bakalar, J.B. *Cocaine. A Drug and Its Social Evolution*. New York: Basic Books, Inc., pp. 308, 1976.

Jerí, F.R. (ed.). *Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine*. Lima, Peru: Pacific Press, pp. 264, 1980.

Maier, H.W. *Der Kokainismus - Geschichte, Pathologie, Medizinische und behördliche Bekämpfung.* [Cocaine. History, Pathology, Medical and Clinical Aspects.] (Ger). Leipzig: Georg Thieme Verlag, pp. 269, 1926. [English translation now in press to be published by the Addiction Research Foundation, 1985].

Petersen, R.C. and Stillman, R.C. (eds.). *Cocaine: 1977*. Rockville, MD: Dept. of Health, Education, and Welfare, Public Health Service, pp. 223, 1977.

Phillips, J.L. and Wynne, R.W. *Cocaine: The Mystique and the Reality*. New York: Avon Books, pp. 318, 1980.

Rivier, L. and Bruhn, J.G. (eds.). *Coca and Cocaine - 1981. A Special Issue*. Journal of Ethnopharmacology 3(2 & 3): pp. 379, 1981.

Siegel, R.K. *Cocaine Smoking*. Journal of Psychoactive Drugs 14(4): pp. 359, 1982.

Spotts, J.V. and Shontz, F.C. *Cocaine Users: A Representative Case Approach*. New York: Free Press, pp. 517, 1980.

Stone, N., Fromme M. and Kagan, D. *Cocaine: Seduction and Solution*. New York: Clarkson, N. Potter Inc., pp. 276, 1984.

Thornton, E.M. Freud and Cocaine - The Freudian Fallacy. London: Blond & Briggs, pp. 340, 1983.

U.S. Department of Health, Education, and Welfare. Research Issues 15. Cocaine - Summaries of Psychosocial Research. Rockville, MD: NIDA, pp. 147, 1976.

BIBLIOGRAPHY

1 Acker, D., Sachs, B.P., Tracey, K.J. and Wise, W.E.
ABRUPTIO PLACENTAE ASSOCIATED WITH COCAINE USE.
American Journal of Obstetrics and Gynecology 146(2): 220-221, 1983.

E. - case rep. - clin. pap. - human - female - adult - user - acute - chronic - self-admin. - intranasal - inhal. - i.v. inject. - anesth. - toxicity - treatm. - CNS - seizure - reac. time - resp. depr. - stim. - pain - tachycard. - hypertens. - cardiovasc. - card. arrest - pulse - blood press. - blood - urine - hepatitis - respir. - pulm. ed. - uterus - fet. death - fetus - pregnancy - body temp. - USA

The authors present two case reports which suggest an association between cocaine use and *abruptio placentae* (i.e., premature detachment of the placenta). It is well-known that hypertension, seizures, respiratory arrest and cardiac failure can result from cocaine consumption; in a pregnant woman, cocaine-induced hypertension may be misdiagnosed as increased blood pressure due to the gravid state. In the first case, a 21-year-old woman in her fifth month of pregnancy experienced headache, back pain and vaginal spotting 5 to 20 min after injecting cocaine i.v. After 13 days in hospital the vaginal bleeding worsened, despite treatment, and uterine contractions began. Fifteen days later these symptoms recurred to a more marked degree. *Abruptio placentae* was diagnosed and a stillborn infant was born 12 hr after labour had augmented. In the second case, a 19-year-old woman in her eighth month of pregnancy presented with vaginal bleeding and contractions a few hours after snorting cocaine. She was delivered of a viable female infant by cesarean section and a large clot was observed behind the placenta. It is speculated that in these two cases cocaine use may have led to acute hypertension which in turn could have led to *abruptio placentae*. Obstetricians are urged to advise against cocaine use during pregnancy.

2 Adriani, J.A. and Campbell, D.
FATALITIES FOLLOWING TOPICAL APPLICATION OF LOCAL ANESTHETICS TO MUCOUS MEMBRANES.
Journal of the American Medical Association 162(17): 1527-1530, 1956.

E. - clin. pap. - human - dog - female - adult - top. admin. - toxicity - therap. use - CNS - convuls. - stim. - blood - allergy - death - USA - dr. comp. tetracaine

The authors discuss mainly the hazards of local anesthesia with tetracaine due to rapid absorption. Topical use of cocaine as an anesthetic can also result in untoward reactions such as excitement and convulsions, but has not caused any fatalities. In a list of 8 topical anesthetics, cocaine is cited as the second most potent in producing numbness.

3 Allen, C.J.
TO BE QUECHUA: THE SYMBOLISM OF COCA CHEWING IN HIGHLAND PERU.
American Ethnologist 8(1): 157-171, 1981.

E. - rev. - human - child - adult - male - female - chronic - oral - stim. - pain percep. - thirst - hunger - S. Am. - coca leaf - Erythrox. coca - dr. int. lime

The author discusses at length the cultural significance of coca chewing in southern Peru. She believes that it is an important and harmless ritual which binds the community together, and that it should not be abolished. Her account of physiological effects is short. The coca leaves are usually mixed with lime. They act as a mild stimulant, relieving sensations of hunger, thirst and fatigue. Although Western observers have held this custom in disdain, regarding it as being very much akin to cocaine snorting in North America, recent evidence suggests rather that even long-term coca chewing is biologically and psychologically harmless. In fact, it may be a good means of coping with the high altitude Andean environment. A quotation is cited in which the abolition of coca chewing in Peru and Bolivia is called a "devastating" proposal.

4 Allred, R.J. and Ewer, S.
FATAL PULMONARY EDEMA FOLLOWING INTRAVENOUS "FREEBASE" COCAINE USE.
Annals of Emergency Medicine 10(8): 441-442, 1981.

E. - case rep. - human - male - adult - self-admin. - i.v. - toxicity - resp. depr. - blood - respir. - pulm. ed. - body temp. - USA - dr. tr. morph.

Intravenous injection of "freebase" cocaine resulted in extreme shortness of breath in a 36-year-old man. Pulmonary edema and respiratory failure were diagnosed. The patient died in the intensive care unit three hours after admission, despite rigorous efforts to save him. The authors believe this to be the first documented example of death after i.v. freebase use, and the first clinical presentation of pulmonary edema after cocaine use.

5 Altshuler, H.L., Burch, M.R. and Dossett, R.G.
EFFECTS OF COCAINE AND D-AMPHETAMINE ON SPONTANEOUS AND PHOTICALLY-DRIVEN OCCIPITAL ELECTROENCEPHALOGRAM OF MONKEY.
Federation Proceedings 33(3): 293, 1974.

E. - abst. - animal - primate - CNS - EEG - USA - dr. comp. amph. - dr. tr. reserp. - dr. tr. l-DOPA

EEG recordings of an unspecified number of monkeys were used to determine the nature of CNS stimulation by cocaine and d-amphetamine. Period analysis technique showed that for both drugs the occipital area was the most affected. Cocaine caused only a slight change in "major period" activity, whereas amphetamine caused a significant increase. Both drugs profoundly altered the photically-driven EEG. Modification with daily reserpine or l-DOPA treatment showed that biogenic amines play a key role in the CNS effects of cocaine and amphetamine.

6 Altshuler, H.L., Burch, N.R. and Dossett, R.G.
THE ELECTROENCEPHALOGRAPHIC EFFECTS OF LONG TERM COCAINE ADMINISTRATION TO RHESUS MONKEYS.
Proceedings of the Western Pharmacological Society 19: 323-325, 1976.

E. - exp. pap. - animal - primate - chronic - exp. admin. - CNS - EEG - tolerance - cross tol. - dependence - physical dep. - USA

Tolerance and reverse tolerance to cocaine hydrochloride were studied in 3 rhesus monkeys. Each animal received 9 mg/kg/day, divided into 3 doses. Effects on the CNS were determined by 40 EEG rcordings over a 10 month period, which showed a decrease in spontaneous activity with chronic treatment. Attenuation of the second phase of the biphasic EEG response suggested the develoment of tolerance to the CNS effects of cocaine. The authors urge more precise studies on EEG responses to clarify the concepts of tolerance, reverse tolerance, and dependence.

7 Anderton, J.M. and Nassar, W.Y.
TOPICAL COCAINE AND GENERAL ANAESTHESIA: AN INVESTIGATION OF THE EFFICACY AND SIDE EFFECTS OF COCAINE ON THE NASAL MUCOSAE.
Anaesthesia 30: 810-818, 1975.

E. - clin. pap. - human - adult - therap. admin. - top. admin. - toxicity - side-effects - cardiovasc. - heart rate - hypertens. - blood press. - EKG - nose - U.K.

Forty-five adult nasal surgery patients were administered cocaine topically on the nasal mucous membranes. Three different doses were used (20, 35 and 50 mg), and side-effects were monitored. The smallest cocaine dose was associated with the least loss of blood. Cardiovascular disturbance was negligible for all doses. The authors summarize the history of cocaine use in anesthesia, calling it "the only important, naturally occurring anaesthetic agent." They advise physicians to be aware that cocaine sprayed into the nose is absorbed at a unpredictable rate, and therefore a safe dose cannot be defined. Allergy can produce a systemic toxic reaction even in the absence of overdose. A technique is described for safe topical administration of cocaine.

8 Aniline, O.
COCAINE - A DRUG AND ITS SOCIAL EVOLUTION.
Journal of Clinical Psychiatry 43(12): 508, 1982.

E. - bk. rev. - user - hist. of coc. - dependence - dr. comp. ethanol - dr. comp. amph. - dr. comp. opioids

The author reviews the book Cocaine - A Drug and Its Social Evolution by L. Grinspoon and J. B. Bakalar (New York: Basic Books, pp. 308, 1982). He praises the book for its clarity, diversity of subjects (i.e., history, sociology, politics, pharmacology and dependence), and accurate references and index. He considers it an informative but unoriginal work aimed at the non-specialist reader. The book contains opinions on cocaine from many historical persons including Sigmund Freud.

9 Anonymous
COCA IN THE OPIUM-HABIT.
Therapeutic Gazette 1(7): 215, 1880.

E. - gen. disc. - human - oral - therap. admin. - habit - withdrawal - dr. comp. opium

A physician recommends tablespoonful doses of fluid extract of coca as an antidote to the opium habit. Opium use should be discontinued at once, and as much coca taken as desired to relieve the opium cravings. This treatment should be supervised by a medical doctor, in case of "collateral contingencies."

10 Anonymous
COCAINE.
Therapeutic Gazette 1(9): 280, 1880.

E. - gen. disc. - therap. admin. - bot. - stim. - respir. - hunger - *Erythrox. coca* - dr. comp. caffeine

Cocaine is the alkaloid derived from the leaves of _Erythroxylon coca_. Like caffeine, it depresses the appetite, lessens fatigue, and enhances respiration. It can be used to combat wasting diseases and to aid in convalescence from acute illness.

11 Anonymous
ERYTHROXYLON COCA AS AN ANTIDOTE TO THE OPIUM HABIT.
Therapeutic Gazette 1(6): 172, 1880.

E. - gen. disc. - human - therap. admin. - CNS - habit - _Erythrox_. _coca_ - dr. comp. opium

The author expresses enthusiasm for the potential use of cocaine as a cure for opium dependence. He hopes that its effects will be thoroughly tested, as it may prove helpful in treating nervous disturbances as well. Having read the original paper by Dr. Palmer on the subject, he believes that the American medical profession should energetically investigate new remedies like cocaine since "a harmless remedy for the blues" is much needed.

12 Anonymous
REMARKS ON COCAINE AND THE SO-CALLED COCAINE HABIT.
Journal of Nervous and Mental Disease 13: 754-759, 1886.

E. - case rep. - clin. pap. - human - male - female - child - adult - exp. admin. - self-admin. - dose/resp. - s.c. - inject. - toxicity - therap. use - treatm. - side-effect - memory - euphoria - stim. - depression - vocaliz. - pain percep. - aggress. behav. - suicide - hyperact. - sleep - irritability - halluc. - body temp. - heart - blood press. - tachycard. - sex behav. - stom. - nausea - vomiting - urine - bone - spine - teeth - tongue - habit - withdrawal - hydrochloride - S. Am. - dr. int. lime - dr. int. tannin - dr. comp. caffeine - dr. comp. morph. - dr. comp. ethanol

A physician self-administered two grains of cocaine hydrochlorate in one pint of wine for relief of spinal irritation with successful results. The cocaine and wine solution not only relieved his spinal problem, but also revived his energy and settled his stomach. He believed that some writers had exaggerated the negative effects of cocaine, based on stories about the Indians of South America. He also doubted recent reports of the drug's addictive potential. Upon self-injecting one grain of cocaine hydrochlorate, he experienced euphoria, sleeplessness, large urine volume, and ensuing headache. Two grains produced the additional effect of compelling him to write and talk a great deal. Six grains, injected several days later, caused him to feel upset though he did not become incoherent. Eighteen grains the following night produced exhilaration, memory loss, headache, and palpitation, but no tendency towards violence and no habit formation. He discontinued the cocaine injections at once. He had administered cocaine to two women patients and had not observed any indication of addiction in either case. Long-term use was more likely to cause heart trouble than dependence, in his opinion. Another doctor disagrees, however, having seen seven cases of cocaine habit in his practice. In addition to the aforementioned adverse effects, he had noticed hallucinations, delusions, and emaciation. In a general discussion among physicians, it was concluded that pure cocaine dependence was rare but that there was a considerable number of cases of cocaine-morphine addiction.

13 Anonymous
DANGERS OF COCAINE.
Lancet (April 16): 780, 1887.

E. - clin. pap. - human - female - male - inject. - therap. use - side-effects - vocalize. - tact. halluc. - pain percep. - card. arrhyth. - breast - nose - eye - blindness - dr. tr. amylic nitrite

Five doctors discuss their use of cocaine as an anesthetic, noting side-effects such as blindness, uncontrolled vocalization, tactile hallucinations, syncope and aphasia. Two doctors point out that the side-effects are usually the result of a high dose, eventually disappear, and can be counteracted with amylic nitrite.

14 Anonymous
CHRONIC COCAINISM FROM CATARRH SNUFF.
Journal of the American Medical Association 28 (June): 1092, 1897.

E. - case rep. - human - female - adult - chronic - self-admin. - tremor - sleep - vis. halluc. - mydr. - Can.

A woman was admitted to a Montreal hospital with hand tremor, staggering gait, insomnia, visual hallucinations and mydriasis. Investigation into her drug-taking habits revealed that for several months she had been using three bottles per week of a catarrh powder, each bottle containing 80 grains with 1.75 per cent cocaine. The therapeutic dose is 1/4 to 1 grain.

15 Anonymous
DIFFERENTIAL DIAGNOSIS OF THE COCAIN [sic] HABIT.
Journal of the American Medical Association 28 (April 10): 715-716, 1897.

E. - gen. disc. - human - toxicity - brain - depression - tact. halluc. - card. arrhyth. - habit - withdrawal - psychosis - dr. comp. ethanol - dr. tr. iron - dr. tr. arsenic

Symptoms of cocaine intoxication such as CNS stimulation can be very similar to those of alcoholism. However, one unique feature often observed among regular cocaine users is that of tactile hallucinations. The user feels foreign bodies crawling beneath the skin, like worms, and can stop this unpleasant sensation only by abstaining from further cocaine use. If the cocaine habit is terminated abruptly, some disorders may ensue such as loss of appetite, palpitation, insomnia, and severe mental problems. Therefore, particularly with "nervous or weak patients," it is advisable to withdraw from the drug gradually.

16 Anonymous
MORPHINO-COCAIN [sic] ANESTHESIA.
Journal of the American Medical Association 28: 272, Feb. 6, 1897.

E. - clin. pap. - human - child - adult - inject. - anesth. - therap. use - stim. - side-effects - thirst - bladder - urethra - foot - leg - dr. int. morph.

A physician used a combination of morphine and cocaine as an anesthetic in 544 cases with great success. With 2 centigrams of morphine he mixed cocaine "at 2 per cent, warmed." The anesthesia lasted from 30 to 50 min, with no adverse effects apart from dry throat and mental excitement. He does not recommend this treatment for children or nervous persons.

17 Anonymous
MORPHIUM UND KOKAIN. [Morphine and Cocaine.] (Ger)
Münchener Medizinische Wochenschrift 72(9): 346-347, 1925.

G. - clin. pap. - human - male - toxicity - treatm. - side-effect - anxiety - motiv. - crim. behav. - prog. drug use - schizophrenia - psychosis - halluc. - personality disint. - heart rate - anemia - sex. behav. - impotence - nose - mydr. - addiction - dr. int. morph. - caffeine

After the first world war there was a great increase in the abuse of morphine and cocaine, which was duly reflected in the scientific literature. The author, who wishes to remain anonymous, gives his personal observations on these drugs both as a physician and as a patient. It is not easy for him to look back on his three-year period of addiction, but he hopes that by so

17 Citation

doing he can make a valuable contribution to current knowledge. In his case, morphine addiction resulted from mere curiosity at first, but because of a neuropathological disorder it was difficult to give up the habit. The subjective effects of morphine are generally thought to be enhanced by the addition of cocaine. Also the side-effects of cocaine such as mydriasis (dilated pupils), hallucinations, and rapid heart beat can be diminished with morphine. Very large doses of cocaine are sometimes taken to counteract undesirable effects of morphine as well. The author recalls taking 10 or 13 times the maximum safe dose of cocaine. Cocaine abuse on such a scale results in diminished sex drive with impotence, pallor, anemia and a contrasting red nose. Mentally an addict may experience something like schizophrenia, with an inability to get any joy out of life. If he is far gone, he may create false prescriptions in order to procure the drug he wants. He falls into moral insanity, becoming sentimental and unreasonable. The only hope for this type of patient lies in complete abstinence for at least six months with no turning back.

18 Anonymous
CONSUMPTION OF COCAINE IN AUSTRALIA.
Journal of the American Medical Association 96: 54, 1931.

E. - Australia - USA - U.K. - Can.

The author is surprised at recent figures indicating that Australia is ahead of all other Anglo-Saxon countries in cocaine consumption. Per million persons, 14.67 kg were recorded for Australia by the League of Nations opium board, as compared with 7.88 kg in the US, 5.5 kg in Britain, and 5.46 kg in Canada. The high figure may be due to use of cocaine as a local anesthetic in dental extractions.

19 Anonymous
THE ILLICIT TRAFFIC IN NARCOTICS THROUGHOUT THE WORLD.
Bulletin on Narcotics 3(1): 1, 4-5, 7, 10, 58, 1951.

E. - gen. disc. - USA - Asia - Africa - Europe - Japan - Egypt - France - Greece - Italy - Austria - Germany - Switz.

The author gives an update on recent figures pertaining to illicit world trade in cocaine, hemp, opium, morphine, heroin and synthetic drugs. In Europe, cocaine seizures decreased from 20,195 g in 1936 to 6,798 g in 1948. Cocaine seizures increased in the US, however, from 473 g in 1936 to 5,954 g in 1948. It is smuggled into the US from Egypt, France, Greece and Italy was well as Peru and Japan.

20 Anonymous
TEN YEARS OF THE COCA MONOPOLY IN PERU.
Bulletin on Narcotics 14(1): 9-17, 1962.

E. - gen. disc. - human - adult - oral - bot. - law - price - hist. of coc. - hunger - habit - tolerance - prog. drug use - teeth - withdrawal - Europe - S. Am. - coca leaf - Erythrox. coca

Excerpts from a memorandum on the problem of coca-leaf chewing in Peru are presented. Only a few sentences relate to effects on health. It is noted that the first publication on the effects of coca chewing appeared in 1499. In the 1940's, a pamphlet called "The Coca Leaf is Harmful to Health" was distributed in Peru. Alkaline substances such as chalk combined with saliva serve to improve the taste of the leaves and to release their cocaine content. There are reports of 80-year-old Indians who have chewed coca leaves all their lives with no adverse effects on health whatsoever. Coca leaves may supply vitamins which prevent hunger and fatigue. Placed in a new environment, even long-term, heavy chewers are able to abandon the habit at once, without undue preoccupation. The average 50 g consumed per day is not usually increased with time. A 1949 United Nations Commission of Inquiry concluded that coca chewing does have negative effects on health, but that it is not cocaine "addiction in the medical sense." Its eradication was recommended, although no evidence was given of physical deterioration due to this habit. The remainder of the excerpts deal with the economic and agricultural aspects of coca cultivation.

21 Anonymous
HEROIN AND COCAINE.
British Medical Journal ii(5420): 1280-1281, 1964.

E. - gen. disc. - human - female - adoles. - y. adult - heavy user - epidem. - treatm. - law - dependence - Can. - U.K. - dr. comp. heroin - dr. comp. morph. - dr. comp. pethidine

The number of cocaine addicts in Great Britain rose from 30 in 1959 to 171 in 1963. Many cases did not originate with medical use, and the problem is spreading from London to the provinces. Addiction to other drugs besides cocaine and heroin has not shown a similar increase. Forty or 50 Canadians with drug dependence problems were known to emigrate to Britain when the Canadian laws were changed recently. However, the main cause of the increase in cocaine and heroin users is probably the creation of a black market, made possible by over-prescription by certain doctors. The author concludes that cocaine and heroin constitute the most serious drug problems in Britain.

22 Anonymous
$2 MILLION SETTLEMENT FOR BRAIN INJURY FROM ANESTHETIC OVERDOSE.
Anesthesia and Analgesia 53(4): 520, 1974.

E. - case rep. - human - female - y. adult - therap. use - law - o.d. - coma - brain - card. arrest - death

A 22-year-old woman was admitted as an outpatient for possible lung pathology. The radiologist ordered a one per cent solution of cocaine to be used as a local anesthetic in order to insert radiopaque material into the throat and trachea. The pharmacy sent a ten per cent solution labelled as such, which the radiologist used, not noticing that it was the wrong dose. The patient suffered cardiac arrest, permanent brain damage and coma allegedly from the overdose. She was not expected to survive the trauma. Details of the ensuing law suit are given.

23 Anonymous
COCAINE "SNORTING" FOR FUN.
Medical Journal of Australia 2(2): 40, 1976.

E. - gen. disc. - human - oral - i.v. - toxicity - therap. use - treatm. - hist. of coc. - CNS - hyperref. - convuls. - depression - stim. - pain percep. - paranoia - euphoria - aggress. behav. - sleep - confusion - psychosis - respir. - hunger - stom. - nose - eye - mydr. - tolerance - dependence - physical dep. - psych. dep. - USA - S. Am. - Australia - Coca-Cola - dr. comp. caff. - dr. int. heroin

Cocaine has been used as an anesthetic since the 8th century A.D. It was present in the original Coca-Cola made in 1892, though removed from the drink by 1906. In white, middle-class America cocaine is now referred to as the champagne of drugs, and is either snorted or injected. Adverse effects include depression, confusion, dizziness and convulsions. Psychotic [sic] dependence occurs, but there is no characteristic withdrawal syndrome associated with cocaine. Repeated high doses can lead to a true toxic psychosis, paranoia, and violent behaviour. Heroin is sometimes self-administered by chronic users to combat the depression resulting from long-term cocaine use. The author expresses concern for the recent rise in the popularity of cocaine in the US.

24 Anonymous
COCAINE.
South African Medical Journal 53(21): 820, 1978.

E. - gen. disc. - human - lt. user - heavy user - self-admin. - inhal. - i.v. - resp. depr. - nausea - physical dep. - psych. dep. - death - USA - dr. int. barb. - dr. int. heroin

Over 5 million Americans are said to have used cocaine as a recreational drug. Light users will inhale 150-250 mg at a social gathering, perhaps in combination with drinking alcohol. Heavy users will administer as much as 1 g cocaine in a few hours i.v., and combine it with heroin or barbiturates. Psychological dependence can develop. Lethal dose varies greatly, sometimes being less than 500 mg. Death is caused by respiratory depression.

25 Anonymous
COCAINE.
British Medical Journal i(6169): 971-972, 1979.

E. - gen. disc. - clin. pap. - human - user - oral - therap. admin. - intranasal - epidem. - legal cont. - CNS - tremor - coma - convuls. - resp. depr. - stim. - pain percep. - blood press. - respir. - eye - physical dep. - S. Am. - USA

The author gives a brief summary of the history of coca-chewing in South America and the use of cocaine as an anesthetic and stimulant. Cocaine has two important pharmacological properties: it prevents the conduction of impulses in nerve fibres, and inhibits the reuptake of noradrenaline at sympathetic neurones. This latter property causes potentiation of the action of catecholamines, resulting in CNS stimulation. As little as 20 mg can produce excitement, hyperreflexia, restlessness, delirium, coma, and death due to respiratory arrest. Because of its addictive potential, cocaine is not considered a safe anesthetic and is limited now to use in terminal care or ear, nose, and throat surgery. The world-wide short supply of cocaine is attributed to its recent popularity as a drug of abuse in the US where 10 million persons are said to have tried it.

26 Anonymous
COCAINE.
The Medical Letter on Drugs and Therapeutics 21(4): 18-19, 1979.

E. - gen. disc. - human - user - exper. user - self-admin. - i.v. - oral - top. admin. - intranasal - toxicity - therap. use - CNS - convuls. - depression - stim. - psychiat. - paranoia - euphoria - dysphoria - sleep - psychosis - cardiovasc. - tachycard. - blood press. - nose - tolerance - dependence - physical dep. -

hypertherm. - death - body temp. - USA - S. Am. - Erythrox. coca - dr. comp. amph. - dr. comp. phencycl. - dr. int. epi.

The author briefly outlines what cocaine is, various routes of administration, its effects and toxicity. A very popular illicit drug in the US, cocaine is imported from South America but is seldom sold in its pure form. It can be snorted, taken orally, or injected i.v. Effects include vasoconstriction, tachycardia, increased blood pressure and body temperature, and euphoria. In large doses, it may cause such toxic reactions as erosion of nasal mucosa, ulcers, and convulsions. Death can occur due to hyperpyrexia or ventricular fibrillation. Psychiatric reactions such as paranoia and psychosis have been reported. Abrupt withdrawal in heavy users results in depression and drowsiness; this may be interpreted as a withdrawal syndrome.

27 Anonymous
THE DEADLY DELIGHTS OF COCAINE.
Emergency Medicine 15(4): 67-81, 1983.

E. - gen. disc. - human - user - exper. user - chronic - self-admin. - inhal. - i.v. - i.m. - toxicity - treatm. - epidem. - CNS - symp. NS - convuls. - depression - stim. - abnor. behav. - subj. change - psychol. - psychiat. - aggress. behav. - sleep - hyperact. - irritability - tact. halluc. - -cardiovasc. - tachycard. - hypertens. - respir. - asthma - hoarse voice - sex - nausea - vomiting - hunger - thirst - urinalysis - skin - sweating - nose - dependence - physical dep. - psych. dep. - death - hypertherm. - phys. det. - USA - dr. tr. diaz. - dr. tr. propan. - dr. tr. barb. - dr. int. NE - dr. int. DOPA

Dr. G.R. Gay, director of emergency medicine at the Haight-Ashbury clinic in San Francisco, gives his impression of current trends in cocaine use in the US, adverse effects, and best methods of treatment. He explains the tremendous pleasure experienced by the cocaine user as a result of its interaction with norepinephrine and dopamine. The "pleasure center" of the brain is activated, allowing the user to enjoy increased perceptual awareness, euphoria, excitement, and heightened mental and physical energy. Respiratory rate is initially enhanced, then diminishes to a slow, shallow pattern. Respiratory depression can occur if CNS circulation and cardiac output both become inadequate. Hyperthermia and hypertension can result from excessive CNS stimulation. Fatal dose is about 750-800 mg, but varies a great deal in individual cases. Recent incidence of cocaine toxicity has increased sharply because of the use of "freebase" or purified drug. The psychological allure of cocaine is compared to the thrill of a first love. Dr. Gay recommends specific treatments depending on the degree to which the cocaine reaction has progressed. Diazepam should be used in cases of advanced CNS stimulation, and propanolol for tachycardia, hypertension, or ventricular ectopy. The mental state of the patient is also important. A reassuring yet professional manner will be more helpful than an authoritarian approach. Apart from the more serious symptoms such as cardiac and respiratory failure, adverse side-effects of cocaine use should also be treated. These can include needle tracks, damaged mucosa, bronchitis and cough. Destructive behaviour can result if paranoia develops; this can be prevented by the use of propanolol in chronic, high-dose users.

28 Anonymous
IMAGES OF COCAINE.
The Lancet ii(8361): 1231-1232, 1983.

E. - gen. disc. - human - animal - user - lt. user - acute - chronic - inhal. - i.v. - intranasal - toxicity - therap. use - treatm. - hist. of coc. - law - o.d. - price - brain - convuls. - stim. - psychosis - lungs - liver - nose - psych. dep. - death - USA - U.K. - S. Am. - Asia - free-base - hydrochl. - dr. comp. amph. - dr. comp. heroin - dr. comp. opioids

The history of cocaine use began with the Incas who chewed coca leaves as a sign of high status; this method of consumption produces low blood levels. In Freud's time, cocaine was enthusiastically heralded as a treatment for morphine addiction until its dangers began to be recognized. In 1916 in Britain, cocaine was put under strict control in the Defence of the Realm Act. A recent upsurge of use has been noted in Britain, beginning around 1973. Its new image is that of an expensive, middle-class recreational drug. Prolonged use results in psychological dependence. Overdose can cause collapse, convulsions and death. Twenty-four cocaine-related fatalities were reported for one Florida county in a period of 3 to 4 years. Some casual users, however, undoubtedly enjoy the drug without harmful effects. The high price of cocaine limits its availability to the average person. The author feels that the recent image of cocaine as a recreational drug is misleading because it fails to suggest its potential harmful effects.

29 Anonymous
ADVERSE EFFECTS OF COCAINE ABUSE.
The Medical Letter 26(662): 51-52, 1984.

E. - gen. disc. - human - chronic - inhal. - i.v. inject. - intranasal - toxicity - treatm. - o.d. - CNS - reac. time - convuls. - stim. - depression - psychomot. - psychiat. - anxiety - paranoia - dysphoria - suicide - sleep - hyperact. - irritability - psychosis - cardiovasc. - card. arrhyth. - hypertens. - withdrawal - fever - hypertherm. - nose - death - USA - free-base - dr. comp. amph. - dr. int. heroin - dr. int. alcohol - dr. tr. diaz.

Cocaine is a particularly dangerous drug when smoked, injected i.v., or swallowed. It can also be lethal if used in combination with heroin or alcohol. Intranasal use (called snorting) is the most common, sometimes occurring in binges followed by a crash characterized by dysphoria, irritability and excessive sleepiness. Overdose symptoms can be very rapid to appear and include marked anxiety, fever, convulsions and hypertension. Chronic use of this CNS stimulant can result in psychiatric complications such as paranoid psychosis and depression with suicidal impulses. Physical problems accompanying cocaine use will vary with route of administration: smoking may cause lung damage; i.v. injection, infection; and intranasal use, destruction of the nasal septum (i.e., the thin wall dividing the nasal cavity into halves).

30 Anonymous
COCAINE'S DANGEROUS REWARDS.
Science News 125(15): 238, 1984.

E. - sec. disc. - human - rat - law - side-effect - inject. - price - brain - convuls. - sleep - phys. dep. - addiction - death - dr. comp. heroin - dr. comp. morph. - opiates

Cocaine is compared with heroin in its ability to activate a reward mechanism in the brain and to produce undesirable side-effects. Although not physically addictive, cocaine is illegal, expensive and often impure. Experiments with rats have shown that unlimited access to cocaine can lead to loss of body weight, sleep disturbances, convulsions and viral infections.

31 Aramayo, G. and Sanchez, M.
CLINICAL MANIFESTATIONS USING COCAINE PASTE.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 120-126, 1980.

E. - book - clin. pap. - gen. disc. - human - male - adult user - acute - chronic - inhal. - i.v. - dose/resp. - toxicity - therap. use - treatm. - hist. of coc. - CNS - convuls. - depression - stim. - vocaliz. - psychomot. - cognit. - percep. - subj. change - memory - psychiat. - anxiety - paranoia - euphoria - dysphoria - aggress. behav. - homicide - crim. behav. - irritability - delusions - affect - thought disorder - orientation - schizophrenia - mania - psychosis - halluc. - aud. halluc. - vis. halluc. - tact. halluc. - heart rate - card. arrhyth. - card. arrest - pulse - respir. - vomiting - anorexia - musc. - psych. dep. - withdrawal - compulsion - body wt. - wt. loss - death - age - S. Am. - Bolivia - Erythrox. coca - coca paste

The alkaloid cocaine is extracted from the leaves of a plant called Erythroxylon coca which is grown in the Andes of South America. Famous names attached to the history of this drug include that of Sigmund Freud who recommended it in the treatment of depression, although he was aware of its potential to cause psychotic hallucinations. Symptoms of acute intoxication were recognized as early as 1898; these were: accelerated respiration, cardiac arrhythmia, emesis, and anxiety. Serious cases might also exhibit increased muscle tone, convulsions, alterations of consciousness, and death. One case of death due to acute intoxication was observed by the authors; the victim had taken 100 g cocaine, probably as a reaction to domestic problems. Other authors have recorded additional characteristics of intoxication such as excitation; shouting; fatigue; stupor; auditory, visual, and tactile hallucinations; mania; euphoria; and, after i.v. use, dysphoria; suspiciousness; delirium; and circulatory collapse (with high doses). Chronic intoxication is characterized by nervousness, hypersensitivity to noise, memory changes, affective lability and insomnia. Cocaine psychosis is manifested by hallucinations, delusions of persecution or of grandeur, and aggressiveness. Twenty male smokers of cocaine paste, from 18 to 44 years old, were interviewed in a jail in La Paz, once while intoxicated and once while free from the effects of the drug. They were generally a dishevelled group, 100% of whom showed paranoid delusions. The occurrence of paranoia and hallucinations was correlated markedly with the dose smoked (i.e., higher occurrence went along with higher dose). Tables are given analyzing the country of origin, marital status, educational level and occupation of the patients. A detailed description is given of their mental and physical states. Cessation of drug intake produced depression, slowness in thinking, weakness and a feeling of emptiness. The authors consider the smoking of cocaine paste a highly addictive practice likely to cause psychological dependence.

32 Aschaffenburg, G.
ZUR EINWIRKUNG DES KOKAINS AUF DAS GESCHLECHTSLEBEN.
[The Effects of Cocaine on Sexual Behaviour.] (Ger)
Deutsche Medizinische Wochenschrift 9(2): 55-57, 1925.

G. - case rep. - human - male - adult - chronic - therap. admin. - treatmt. - stim. - abnor. behav. - anxiety - insomnia - prog. drug use - affect - interper. rel. - halluc. - tact. halluc. - disinhib. - heart rate - pallor - sex. behav. - impotence - homosexual. - addiction - age - veronal - alcohol - tobacco

It has been reported that under the influence of cocaine some individuals undergo a change of sexual preference. In other words, because of the drug-induced disinhibition homosexual tendencies which are normally suppressed come to the fore and produce behaviours which the subject would not exhibit otherwise. A detailed case report is given to illustrate the peculiar effect of cocaine on sexual behaviour. A 42-year-old engineer with a history of very moderate alcohol and tobacco use, married and the father of three healthy children, consulted a physician for difficulty in swallowing and speaking. Diagnosed with tonsillitis, he was advised to soothe his throat with cocaine. He increased the dose rapidly, and soon found that if he discontinued his cocaine use for even a few hours mental and physical agitation would ensue. More and more over a period of several years he enjoyed the good mood, clear-mindedness, and self-confidence which cocaine produced. The pleasurable effects would not last more than about an hour, however, giving way to anxiety. Business associates began to notice his frequent mistakes, and his wife was disturbed by his uncharacteristic moodiness. He had no hallucinations, but complained of rapid heart beat and severe insomnia. Upon consulting the author, he recognized the destructiveness of his cocaine habit and expressed an earnest desire to be done with it. The author recommended complete abstinence at once and the patient surrendered his entire supply of cocaine. The patient revealed that he had become impotent, but was not sure whether this problem related to his age more than to his addiction. He found himself fantasizing about sexual relationships with men for the first time in his life, and frequently masturbated. Nevertheless in the author's opinion he was not a latent homosexual, and cessation of cocaine use put an end to all unusual sexual behaviours. Freud considered all men to be potentially bisexual and for some this may explain the patient's experience. However, the author is convinced that in this case cocaine had the effect of temporarily altering the sexual preference of an otherwise normal heterosexual man.

33 Astrachan, B.M. and Boltax, S.
THE CYCLICAL DISORDER OF SHERLOCK HOLMES.
Journal of the American Medical Association 196(12): 1094, 1966.

E. - lett. ed. - human - male - adult - user - acute - inject. - depression - stim. - paranoia - euphoria - lethargy - hypoact. - Europe

Two Sherlock Holmes enthusiasts contest the view that Holmes suffered from paranoia. They prefer to think that his mood oscillations were symptomatic of a manic-depressive disorder. The detective's cocaine habit is described as something he would resort to, sometimes for a prolonged period, in rebellion against boredom. Holmes called cocaine an "artificial stimulant" which helped him to cope with the "dull routine of existence." It is noted that Watson disapproved of his use of the drug.

34 Avorn, J.L.
THE ROLE OF COCAINE IN TREATING INTRACTABLE PAIN IN TERMINAL DISEASE.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 227-335, 1980.

E. - book - clin. pap. - gen. disc. - human - animal - adult - inhal. - oral - dose/resp. - therap. admin. - top. admin. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - CNS - stim. - pain - euphoria - lethargy - affect - tachycard. - respir. - cancer - epineph. - hunger - tolerance - dependence - psych. dep. - habit - withdrawal - death - age - S. Am. - Peru - dr. comp. amph. - heroin - barb. - morph. - opiates - ethanol - LSD

This paper on one possible therapeutic use of cocaine also contains remarks on the general effects of the drug, especially adverse effects, which are relevant to recreational use. In the past, cocaine has been used in connection with religious rites, as an everyday stimulant, and as an antidote to hunger. Today it is used recreationally and therapeutically as a topical anesthetic by otolaryngologists. Interest is also reviving in its potential to relieve chronic pain in the terminally ill. Although cocaine is not a pain-reliever in the strict sense of the term, it is a euphoriant and as such can alter an individual's perception of pain. The most obvious risk associated with cocaine administration is that of habituation. Even though no tolerance or abstinence syndrome exists, a person may be tempted to take repeated doses because of the powerful reinforcing sensation produced by the drug. Experimental animals have been observed to poison or kill themselves after excessive self-administration. However, in terminally ill patients who must depend upon their physician for each dose, the danger of habit-formation is hardly relevant. A second possible risk is that of over-stimulation (e.g., tachycardia, hyperthermia, hyperpnea) which may be particularly dangerous to the elderly. However, this risk can be minimized by proper titration of dose. The attitude of many doctors towards cocaine is influenced by its reputation as an illicit drug of addiction. Oddly, it is feared more than other street drugs such as barbiturates and amphetamines. Some people worry that if it is more widely used therapeutically, its abuse on the streets will likewise increase. In conclusion, the author recommends that more research should be done on cocaine so that its potential as a pain-reliever can be exploited for the benefit of patients who are in great distress.

36 Barash, P.G.
COCAINE IN CLINICAL MEDICINE.
In: Petersen, R.C. and Stillman, R.C. (eds.), Cocaine: 1977. Rockville, MD: Department of Health, Education, and Welfare, Public Health Service, 193-210, 1977.

E. - book - rev. - human - acute - therap. admin. - top. admin. - anesth. - treatm. - side-effects - hist. of coc. - o.d. - CNS - hyporef. - seizure - resp. depr. - cardiovasc. - tachycard. - blood press. - card. arrhyth. - pallor - pulse - allergy - respir. - nausea - vomiting - skin - eye - hypertherm. - death - coc. mud - coc. flakes - procaine - S. Am. - dr. int. halothane - dr. int. reserp. - dr. int. DOPA

The author reviews the uses of cocaine in clinical medicine, particularly as a topically administered anesthetic. He believes that the drug can be valuable in such procedures as spine and nose surgery, since it is "the only drug capable of causing both intense vasoconstriction and local anesthesia." The maximum dose recommended by the AMA is 1 mg/kg, but some textbooks suggest up to 3 mg/kg. Reports of lethal dose range from 22 mg to 2500 mg, though a general agreement has been reached that solutions of over 20% should not be used. The possibility of toxic reactions can be minimized by staying below 10%. Elderly and debilitated patients require smaller doses for safety. Interaction between cocaine and drugs like reserpine, methyldopa and dopamine can be fatal. Toxic reactions to cocaine result from overdose, rapid absorption, or allergy (rarely). Cocaine stimulates the cardiovascular system and CNS. The progressive phases of a systemic reaction include euphoria, excitement, apprehension; nausea, vomiting, muscular spasms; hypertension, tachycardia and skin pallor. Death can result from respiratory and circulatory failure. The author gives detailed directions on emergency procedures to deal with such adverse reactions. He emphasizes the excellent record of the safety of cocaine in clinical practice, provided that reasonable safeguards are observed.

37 Bar-Or, D. and Wahby, L.
COCAINE INTOXICATION, DELIRIUM, DEATH IN BODY PACKER.
Annals of Emergency Medicine 11(7): 389-390, 1982.

E. - lett. ed. - sec. disc. - human - male - user - oral - toxicity - o.d. - aggress. behav. - resp. depr. - tachycard. - card. arrhyth. - respir. - pulm. ed. - hypoxia - cereb. ed. - thirst - mydr. - death - autops. - dr. tr. haldol

The authors question a diagnosis of cocaine poisoning reported by D.A. Fishbain and C.V. Wetli (Ann. Emerg. Med. 10(10): 531-532, 1981). The patient's presenting symptoms of polydipsia, agitation and tachycardia do not necessarily indicate cocaine toxicity. Other possibilities should be considered, especially since adequate laboratory tests were not performed. The patient may have been lying when he stated that he had swallowed an aluminum foil packet of cocaine, since no foreign bodies were revealed by radio film. Police are not qualified to diagnose a drug overdose. The pulmonary and cerebral edema found at autopsy could have occurred because of opiate overdose or some other unknown cause. The patient's history was unreliable and the diagnosis of cocaine poisoning could not be definite.

38 Bartholow, R.
CUCA [sic].
Therapeutic Gazette 1(5): 128-129, 1880.

E. - gen. disc. - clin. pap. - human - adult - oral - therap. use - CNS - heart - blood press. - pulse - respir. - urine - S. Am. - France - Erythrox. coca - dr. comp. caff. - dr. int. caff. - dr. int. amph. - dr. int. narc.

Cocaine is the alkaloid of the coca plant. Its odour, flavour, and appearance resemble those of tea, and it has a bitter taste. Its effects are enhanced by interaction with caffeine, stimulants, and narcotics. Internal administration causes an initial decrease in pulse and blood pressure, followed however by an increase in both. Respiration increases and fatigue diminishes. A large quantity can produce paralysis. It lessens the need for food. Therapeutically, the French have used it as a restorative and it should also prove useful in curing phthisis as well as migraine.

39 Bednarczyk, L.R., Gressman, E.A. and Wymer, R.L.
TWO COCAINE-INDUCED FATALITIES.
Journal of Analytical Toxicology 4(5): 263-265, 1980.

E. - case rep. - clin. pap. - human - adult - male - female - user - self-admin. - i.v. - inject. - oral - toxicity - o.d. - resp. depr. - reac. time - convuls. - card. arrest - pulm. ed. - hemorrh. - g.i. - intest. - hypertherm. - death - autops. - USA - S. Am. - dr. tr. diaz.

Two case reports are given of deaths due to cocaine abuse. The first, a 21-year-old female, injected undiluted cocaine i.v., went into convulsions shortly afterwards, collapsed and died. Her reaction may have been idiosyncratic, or it may have resulted from a rapidly attained high blood level (5.0 mg/kg post mortem). The second, a 20-year-old male, had consumed 110 rubber balloons filled with cocaine 35 hours before death. He was attempting to smuggle the drug into the US from Bolivia. He lost consciousness while being processed through Customs, was taken to hospital, and presented with normal vital signs. However, he soon began to experience convulsions for which 10 mg diazepam was given. After a short stable period, his condition deteriorated rapidly, he suffered cardiac and respiratory collapse, and was pronounced dead 11 1/2 hours after admission. His blood level of cocaine was 1.6 mg/kg post mortem. Autopsy revealed that 13 balloons containing 2.0 g cocaine each had spilled their contents into the victim's g.i. tract.

40 Bejarano, J.
EL COCAISMO EN COLOMBIA [The Cocaine Habit in Colombia] (Spa.)
America Indīgena 5(1): 11-20, 1945.

Sp. - rev. - human - male - female - child - adult - heavy user - self-admin. - chronic - oral - toxicity - side-effects - price - pallor - reprod. tox. - dev. abnorm. - skin - dependence - habit - phys. det. - Colombia - coca leaf - Erythrox. coca

The habit of coca-chewing is spreading among the working classes of Colombia. The Indian either cultivates the plant himself or spends most of his money buying it. Physical disorders result from addiction, such as pale, wrinkled skin, flabby muscles and anemia. Children of addicts demonstrate low intelligence and other defects. Chronic users commonly commit crimes. In the departments of Cauca and Huila, there are 60,000 coca addicts including men, women and children.

For fuller details on the same subject, see: Citation 41

41 Bejarano, J.
FURTHER CONSIDERATIONS ON THE COCA HABIT IN COLOMBIA.
Bulletin on Narcotics 4(3): 3-19, 1952.

E. - rev. - human - male - female - child - adult - user - chronic - self-admin. - oral - anesth. - toxicity - therap. use - bot. - law - CNS - musc. weak. - behav. - depression - stim. - psychomot. - pain - euphoria - aggress. behav. - motiv. - lethargy - hyperact. - crim. behav. - heart - heart rate - respir. - sex diff. - sex behav. - stom. - thirst - hunger - anorexia - tongue - eye - dependence - habit - withdrawal - body wt. - wt. loss - wt. gain - phys. det. - Colombia - Europe - coca leaf - Erythrox. coca

The coca leaf was brought to Europe in 1750 by Joseph de Jussieu, and its chemistry was first demonstrated in 1859 by Nieman. Erythroxylon coca is grown mainly in the valleys of the Andes in Colombia, and the habit of coca chewing has not spread beyond the areas of its cultivation. Coca chewing is a deleterious practice even though it does relieve hunger, act as a tonic for the heart, and possess restorative powers. The stimulation it effects may be due to altered metabolism. Addicts are known to be intellectually impaired and undernourished. Coca is an aphrodisiac, prolonging sexual prowess in men until an advanced age. However, its disinhibitory effects can lead to such perversions as homosexuality and bestiality. It contains large amounts of vitamins B1, B2 and C, but should not be regarded as a substitute for food. Its anesthetic effects on the tongue and mouth suppress feelings of hunger and thirst. The author disagrees with those who argue that coca-chewing is a necessary adaptation to the stress of high-altitude living. Rather, the coca addict is seeking relief from his wretched and woeful existence. Consumption causes initial euphoria, heightened mental and physical energy, and enthusiasm for work, amounting almost to a frenzy. In two hours, however, these sensations give way to wretchedness and apathy until coca is chewed again. The author insists that there is no such thing as racial inferiority, and that this cannot be used as an explanation for the coca habit among the Indians of Colombia. Coca addiction leads to malnutrition, bad housing, dull emotions, loss of ambition, and a predisposition towards crime. Therefore, it is a great evil to use coca as wages for Indian labour. The author concludes by stating that the government should become active in suppressing coca production and distribution.

42 Bejarano, J.
PRESENT STATE OF THE COCA-LEAF HABIT IN COLOMBIA.
Bulletin on Narcotics 13(1): 1-6, 1961.

E. - gen. disc. - human - self-admin. - oral - hist. of coc. - euphoria - aggress. behav. - stom. - hunger - thirst - dependence - habit - Colombia - S. Am.

The leaves of the coca bush are chewed in Colombia wherever the plant is cultivated. Its use produces euphoria but can entail adverse consequences for physical and mental health. Native inhabitants of Colombia who are addicted to coca will sometimes be paid for hard labour with coca leaves. The habit of chewing coca may desensitize the stomach to hunger which is a prevalent condition in the country. The department of Cauca is known to have the worst coca-dependence problem. The author believes that eliminating this problem would result in community and nation-wide economical benefits. Indigenous inhabitants are introduced to the habit at the age of twelve, and continue it for a lifetime. The intoxication provides them with relief from the loneliness and misery of their daily lives in which they do not enjoy the advantages of drinking water or sanitation. Health centres seem to ignore the problem. The author concludes with a summary of his views on how best to eradicate the habit of coca chewing in Colombia. He mentions the importance of government involvement, education, legislation, modern health facilities, the influence of the clergy, and distribution of information.

43 Bejerot, N.
A COMPARISON OF THE EFFECTS OF COCAINE AND SYNTHETIC CENTRAL STIMULANTS.
British Journal of Addiction 65(1): 35-37, 1970.

E. - clin. pap. - human - anesth. - toxicity - therap. use - side-effects - CNS - tremor - seizure - epilepsy - behav. - depression - stim. - abnor. behav. - vocaliz. - pain - anxiety - paranoia - euphoria - aggress. behav. - sleep - psychosis - aud. halluc. - vis. halluc. - cardiovasc. - blood press. - pulse - bl. vess. - sex behav. - thirst - hunger - sweating - mydr. - tolerance - physical dep. - psych. depend. - withdrawal - dr. comp. amph. - dr. int. opium - dr. int. ethanol - dr. int. barb.

Cocaine addiction is essentially very similar to amphetamine addiction. The author believes that the "synthetic central stimulants have the same relationship to the natural product cocaine as morphine substitutes have to morphine." As evidence of his theory, he cites several examples from the literature in which different authors have observed the same effects from cocaine and amphetamine use. The long list of effects produced by both drugs includes psychic dependence, euphoria, intellectual stimulation, anxiety, paranoia, violence, depression on abstinence, restlessness, reduced hunger, emaciation, increased sexual activity, tremor, rapid pulse, and local anesthesia.

44 Benchimol, A., Bartall, H. and Desser, K.B.
ACCELERATED VENTRICULAR RHYTHM AND COCAINE ABUSE.
Annals of Internal Medicine 88(4): 519-520, 1978.

E. - case rep. - clin. pap. - human - male - adult - user - i.v. - inject. - dose/resp. - anesth. - toxicity - treatm. - side-effects - o.d. - CNS - stim. - prog. drug use - cardiovasc. - heart - heart rate - bradycard. - tachycard. - blood press. - card. arrhyth. - card. arrest - EKG - pulse - blood - respir. - epineph. - urinalysis - withdrawal - USA - _Erythrox. coca_ - methaqualone - methadone - hydromorphone

Cocaine is unusual in that it acts both as a local anesthetic and a CNS stimulant. Small doses slow heart rate, but large doses increase heart rate and blood pressure. Very high doses can result in cardiac arrest by a direct toxic action on the heart muscle. A case report is given of a 37-year-old man who had injected cocaine i.v. approximately ten times during the two days prior to admission. The estimated dose amounted to 140 mg. He presented with palpitations, blood pressure of 120/80 mm Hg, and respirations 20/min. He remained in hospital under observation for 48 hr, and left against doctors' advice. The authors speculate as to the possible cause of the rapid heart beat, noting that others have documented this effect in the past. It is suggested that beta blocking agents might serve to treat cardiac arrhythmia caused by cocaine abuse.

45 Bentley, W.H.
ERYTHROXYLON COCA.
Therapeutic Gazette 1(12): 350-351, 1880.

E. - case rep. - gen. disc. - human - male - adult - oral - therap. admin. - treatm. - hist. of coc. - bot. - price - CNS - depression - stim. - lungs - sex behav. - habit - S. Am. - _Erythrox. coca_ - "Ninga" - opium - ethanol

A physician reports his knowledge and experience of Erythroxylon coca which he first heard of in 1869. Among the ingredients of an effective cough remedy, he noted something called "Ninga" which turned out to be the coca plant. It was described as a stimulating tonic with high nutritional value. The author's further investigations led him to realize that among doctors there was great diversity of opinion about the therapeutic uses and physiological effects of the substance. He prescribed it for diseases of the lungs, leucorrhea, and spermatorrhea, with mostly good results. He suggests that coca may be helpful in treating alcohol and opium addiction because it can "brace" the nervous system without causing any depression. The cocaine habit promotes longevity and vitality in South American Indians, and is an excellent aphrodisiac. The author used it successfully to treat a case of impotence, and it "acted like a charm."

46 Bettinger, J.
COCAINE INTOXICATION: MASSIVE ORAL OVERDOSE.
Annals of Emergency Medicine 9(8): 429-430, 1980.

E. - case rep. - gen. disc. - clin. pap. - human - male - female - adult - oral - toxicity - side-effects - o.d. - CNS - tremor - seizure - epilepsy - confusion - heart rate - tachycard. - blood press. - card. arrest - pulse - blood - leukocyte - respir. - intest. - vomiting - eye - mydr. - hypertherm. - body temp. - USA - S. Am. - dr. tr. diaz. - dr. tr. barb. - dr. tr. phenytoin - cannabis - ethanol

Recreational use of cocaine, usually i.v. or intranasal, has increased greatly in the US in recent years. Most of it is smuggled from South America. A case report is given of a 22-year-old man who presented at a health care centre with symptoms of dizziness and convulsions. In emergency, he had a grand mal seizure for which phenytoin, diazepam and phenobarbital were prescribed. Examination revealed a pulse of 100 beats/min; blood pressure, 160/110 mm Hg; temperature, 37.22°C; respiratory rate, 14 breaths/min. Heart, lungs, abdomen and extremities were normal. After being removed from intensive care, the patient developed cyanosis and further seizures which were controlled with phenobarbital, amobarbital, phenytoin and diazepam. His condition improved, though he was mentally agitated. A search of his knapsack revealed 3 plastic bags containing cocaine. His serum level at 72 hr post-admission was 200 µg%. He gradually improved and admitted to having swallowed cocaine-filled condoms on the way from Peru to Miami. The author concludes with a discussion of the effects of cocaine such as CNS stimulation, restlessness, tremor, convulsions, tachypnea, tachycardia, emesis, respiratory depression (with higher doses), hyperthermia and mydriasis. Three instances are cited in which cocaine was ingested in a container, resulting in death in one case. The author advises emergency departments to be alert to this form of drug overdose.

47 Bewley, T.
HEROIN AND COCAINE ADDICTION.
Lancet i(7389): 808-810, 1965.

E. - clin. pap. - gen. disc. - human - user - exper. user - male - female - adult - adoles. - self-admin. - i.v. - therap. use - treatm. - epidem. - o.d. - prog. drug use - crim. behav. - interper. rel. - sex diff. - dependence - death - USA - U.K. - dr. comp. heroin - cannabis - amph. - ethanol - morph. - barb.

The author confirms reports that cocaine and heroin addicts in the U.K. are acquiring the drugs from non-medical sources. He treated 33 addicts, and gives information on their age, sex, route of administration, origin of addiction, other drug use, relapse, hospital admissions and follow-up details, in table form. The table shows that all the addicts were young, became addicted through the influence of friends, and administered cocaine usually i.v. Five are noted to be Canadian. A relatively small percentage managed to stay drug-free for a significant period of time after treatment. The author believes that cocaine addiction has recently become a small epidemic, and notes the lack of epidemiological research into drug addiction in general. A primary means of prevention would be to minimize the contact that potential addicts have with addicts. Over-prescribing should also be curtailed. Of the 20,000 known cocaine and heroin addicts in New York, most show a pattern of chronic relapsing. A system of compulsory notification would help to monitor the situation. Special treatment units should be provided for the care of drug addicts who are often violent and criminally inclined.

48 Bishop, P.E.
MAMA COCA.
Journal of Psychedelic Drugs 10(2): 165-166, 1978.

The author gives a highly favourable review of the book Mama Coca by Antonil, [No initial] (London: Practical Paradise Publications, pp. 275, 1978). The book contains a detailed study of coca use in rural Colombia where the Paez Indians give ritualistic meaning to their drug habit. Botanical and archeological evidence of coca chewing in Andean South America is provided. The West has condemned drug-taking as "pernicious," because it is not aware of the feelings and beliefs attached to it by some cultures. Antonil criticizes researchers who are unwilling to consider the positive aspects of drug use which can reaffirm traditional values and promote political change. He outlines the history of South American drug-trafficking as a means of political constraint and profiteering. Colombian politicians and landowners are accused of taking over the cocaine trade for their own purposes, even though they pretend to be against it. Descriptions of how to chew and grow coca are given. Not all drug use is abuse, and people should be educated about the advantages of non-authoritarian drug use controls, i.e., informal self-control by the individual user.

49 Blejer-Prieto, H.
COCA LEAF AND COCAINE ADDICTION - SOME HISTORICAL NOTES.
Canadian Medical Association Journal 93 (Sept.): 700-704, 1965.

E. - rev. - human - exper. user - oral - anesth. - therap. use - hist. of coc. - bot. - chem. - brain - depression - stim. - pain - euphoria - sleep - hyperact. - irritability - hunger - tongue - eye - dependence - habit - age eff. - S. Am. - Europe - coca leaf - Erythrox. coca - ethanol - tobac.

Cocaine has not been studied as extensively as other drugs such as alcohol and tobacco. Yet millions in South America and Malaya chew the coca plant habitually for its euphoric effects. It was cultivated centuries ago by the Incas who gave it a vital role in their economy and culture. In the 16th century, Spaniards gave coca freely to the natives of Peru in order to control them, make them work harder, and reduce their food intake. The unusual properties of the coca leaf became known in Europe in the early 1500s, and the first publication on coca appeared in 1565. Its botanical classification was settled around 1753 by Joseph de Jussieu who named it Erythroxylon coca. Enthusiastic 19th century physicians praised the drug for its ability to increase physical and mental energy and to create feelings of "lively satisfaction." Coca also relieved muscular fatigue and prevented tissue wasting. It was said to be an effective remedy for brain exhaustion, mental depression, worry and irritability. Soon it was used to cure asthma, colic and many other ailments. In 1880, however, a physician named G.A. Ward expressed doubts about the new wonder drug whose benefits, he felt, were exaggerated. The alkaloid, cocaine, was isolated in 1858 by Niemann. In 1862, its anesthetic effect on the tip of the tongue was mentioned by Schraff, but its therapeutic potential was not recognized until 1884. It proved a boon to medicine.

Some people think that habitual coca chewing causes premature senility and moral degeneration. The author concludes that the use of coca should be discouraged other than for medical and industrial purposes.

50 Bolton, R.
ANDEAN COCA CHEWING; A METABOLIC PERSPECTIVE.
American Anthropology 78: 630-634, 1976.

E. - rev. - gen. disc. - sec. disc. - human - male - adult - exper. user - oral - hist. of coc. - stim. - euphoria - aggress. behav. - interper. rel. - hypoxia - bl. glucose - hunger - habit - body temp. - age eff. - S. Am. - coca leaf - dr. comp. caffeine

Westerners have been fascinated for centuries by the Andean Indian habit of chewing coca. The author believes that metabolic factors may be involved in the etiology of this practice. The direct psychological effects of coca mastication have not been agreed upon. Euphoria results mainly from very large amounts which are not normally consumed by the Indians. Physiologically, coca provides energy, reduces fatigue, keeps the body warm and lessens hunger. The author suspects that low blood glucose, common among Andean Indians, accounts for the desire for coca. One of the alkaloids in the plant may stimulate the process of gluconeogenesis. Older males tend to chew more than younger males (36.3 g/day vs. 19.6 g/day). One experiment showed that hypoglycemic subjects consumed more coca than normoglycemics. Persons with a low-protein diet also tend to chew more coca. The habit may be important metabolically and nutritionally for inhabitants of a high-altitude environment. It facilitates social interactions and plays a role in community rituals, and may be no more harmful than drinking coffee. Scientific evidence against it is weak; abolition of the practice could be devastating to Andean culture.

51 Borghelli, R.F., Stirparo, M.A., Andrade, J.H., Centofanti, M.H. and Barros, R.E.
ORAL LESIONS DUE TO HABIT OF CHEWING ERYTHROXYLON COCA LEAVES.
Journal of Dental Research 53(3): 694, 1974.

E. - abst. - human - male - adult - exper. user - oral - toxicity - side-effect - histology - mouth - habit - S. Am. - Erythrox. coca - coca leaf

Coca leaf mastication is common in Andean South America. Mucosa lesions were found in 20-year-old male subjects who were examined with frontal light and suitable instruments. Of the 2174 men studied, 5% showed lesions; these cases corresponded to those reporting an addiction to coca.

52 Bose, C.
COCAINE POISONING.
British Medical Journal i(Jan. 4): 16-17, 1913.

E. - case rep. - clin. pap. - human - male - female - adult - exper. user - self-admin. - oral - anesth. - toxicity - treatm. - chem. - law - epilepsy - brain - reac. time - coma - vertigo - tremor - convuls. - depression - speech - aud. percep. - vis. percep. - smell - euphoria - crim. behav. - mania - halluc. - heart - pulse - blood - respir. - lungs - ovaries - breast - stom. - liver - diarrh. - dry mouth - kidney - bladder - urinalysis - teeth - tongue - mydr. - habit - withdrawal - wt. loss - death - autops. - Europe - India - hydrochloride - dr. comp. ethanol - dr. comp. opium - dr. tr. caffeine - dr. tr. ether - dr. tr. ammonia - dr. tr. strych. - dr. tr. morph. - dr. tr. digitalis

The author regrets the recent popularity of cocaine in India, especially in Calcutta. Cocaine use leads to moral depravity and crime; it has disastrous effects on the intellectual and physical well-being of the user. Cocaine addicts cannot be trusted and have no willpower. They will steal and cheat to indulge their craving. Cocaine is highly addictive because of its ability to relieve exhaustion and gloom and to produce euphoria. Habitual use is associated with rapid weight loss, headache, anorexia, insomnia, blackening of teeth, dilated pupils, feeble pulse, fainting, hallucinations, incoherent speech and convulsions. Also noted have been diarrhea and acute mania. Addicts do not succeed easily in giving up the habit. In Europe, hypodermic injection has resulted in fatalities in a few cases of acute poisoning. In all these cases, the following symptoms were observed: dryness and numbness of the mouth and throat; vertigo; dyspnea; poor sight, hearing and sense of smell; rapid, feeble, intermittent pulse; tremors; staggering gait; dilated pupils; epileptiform convulsions; cyanosis, and insensibility. The author had three fatal cases of cocaine poisoning referred to him in Bengal. The first was a 23-year-old male alcoholic and cocaine addict. He consumed a large but unspecified quantity of betel and cocaine with friends, became unconscious, and died on the way to hospital. Cocaine was detected in his urine and viscera on post-mortem examination. The second case was a 28-year-old Hindu female who habitually used cocaine. She was staggering on the street one night, lay down, lost consciousness and died. A large amount of cocaine was found in her internal organs after death, but the dose could not be specified. The third case was a

20-year-old female who ingested cocaine powder one evening, became ill, lost consciousness, and died within about half an hour. Cocaine was present in the viscera, but again it was not possible to determine the dose taken. The author recommends several treatments for acute cases, including stomach pump, coffee, brandy, ether, strychnine and chloroform.

53 Bose, K.C.
COCAINE INTOXICATION AND ITS DEMORALIZING EFFECTS.
British Medical Journal, April 26: 1020-1022, 1902.

E. - case rep. - clin. pap - gen. disc. - human - male - female - adoles. - y. adult - adult - exper. user - acute - chronic - self-admin. - oral - dose/resp. - anesth. - toxicity - treatm. - law - side-effect - price - CNS - musc. weak. - tremor - reac. time - coma - vertigo - convuls. - behav. - depression - stim. - abnor. behav. - cognit. - aud. percep. - vis. percep. - pain - subj. change - memory - euphoria - aggress. behav. - motiv. - lethargy - sleep - crim. behav. - prog. drug use - irritability - delusions - thought disorder - interper. rel. - mania - dementia - vis. halluc. - person. dis. - cardiovasc. - heart - blood - pulse - spleen - respir. - sex behav. - impotence - diarrh. - constip. - liver - dry mouth - hunger - anorexia - urinalysis - skin - sweating - teeth - ear - hearing - tongue - mouth - nose - mydr. - tolerance - habit - withdrawal - body wt. - wt. loss - hypertherm. - death - body temp. - phys. det. - India - hydrochloride - opium - ganja - ethanol

The author expresses concern about the future spread of the cocaine habit in Calcutta, especially among young members of respectable families. Normally cocaine users are already addicted to opium, ganja, or alcohol, but recent cases have occurred in which the cocaine habit has come first. It is taken in powder or tablet form and chewed with betel leaves. Loss of sensation in the tongue and lips is followed by dry mouth. There is no rise in temperature. Heaviness of the head and heart palpitations precede the oncoming hilarity which lasts from 30 to 45 min. The pulse is full and quick, but not more than 110. The user wants to be alone; avoids talking; gets red, hot ears; cold tip of nose; perspiration on forehead and neck; cold finger ends and dilated pupils. If he does not have another dose, his hilarity subsides into depression. Chronic users have black teeth. They need to increase the dose dramatically within a short span of time (e.g., 1 grain to 12 grains within one month). Insomnia, anorexia, dyspepsia, diarrhea, deafness, delusions, hallucinations and mania are known effects of long-term use. Ten case reports are given in which the deleterious consequences of cocaine use were most pronounced. In case 1, a 20-year-old respectable young man fell into bad company, began to use opium and bhang, and tried cocaine. He eventually increased his dose from 1 to 30 grains, become solitary, deceitful, and physically weak. He suffered from insomnia and diarrhea, went into convulsions, and died. Case 2, a 45-year-old Sanscrit scholar, consulted the author for insomnia which he had contracted because of the cocaine habit. Cocaine helped him to fast without losing his energy. He gradually increased his dose from 1 to 5 grains, and felt miserable, suffering from anorexia, insomnia, memory loss and stupidity. Yet he could not give up the habit. He abandoned his priestly duties to mix with low-class persons and live off the charity of others. Case 3, a 45-year-old man, began to chew cocaine for the relief of facial neuralgia, and thus acquired the habit. Among other symptoms, he experienced physical weakness, anorexia, insomnia, constipation, vertigo, headache and impotence. He spends most of his money on cocaine. Case 4, a 52-year-old opium eater, originally took cocaine for the relief of pain. He increased his dose from 2 grains to almost 2 drachms. If necessary, he will steal from his own family to be able to get more cocaine. He has lost weight and suffers from headache and insomnia. He has delusions of being invaded by an evil spirit which tries to kill him. Urinalysis revealed no abnormality. Case 5, a 33-year-old man, cannot give up the cocaine habit, although he recognizes its harmful effects such as weight loss, anorexia, fatigue, hepatic dullness, black tongue and loss of sexual desire. Case 6, a 30-year-old Hindu gentleman, has raised his dose from 2 to 30 grains, with resulting insomnia, weak pulse, black teeth, mydriasis, contracted liver, and loss of sexual appetite. He is spending large sums of money on the drug. Case 7, a 16-year-old Hindu girl, was given cocaine by an elderly women for relief of dysmenorrhea. She gradually increased her dose from 1 to 10 grains, began to choke, and lost consciousness. The author was called in to examine her, and found her experiencing convulsions and tremors which lasted for three minutes. Another similar fit lasted for 10 min. Afterwards, she became very irritable until able to consume more cocaine. She eventually recovered. Case 8 involves a 21-year-old Brahmin who was advised by a quack to take cocaine for spermatorrhea. He acquired the habit, lost all his energy and intelligence, suffered from dizziness and insomnia, could not be reformed, and died. Case 9, a 29-year-old man, became addicted to cocaine and lost his situation. He considers the cocaine habit a miserable folly, but cannot give it up. He lives upon the charity of others. Case 10, a 27-year-old gentleman, experienced mania as the result of excessive cocaine use. He had progressed from ganja to cocaine. He becomes violent if deprived of the drug which he prizes for its ability to produce euphoria. There is no indication that he will recover. The author recommends that cocaine addicts be locked up in asylums where they will be forced to give up the pernicious habit. The illicit sale of cocaine should also be prevented.

54 Bower, B.
COCAINE SMOKING MAY CAUSE LUNG DAMAGE.
Science News 126(3): 37-38, 1984.

E. - sec. disc. - human - male - female - user - treatm. - price - inhal. - toxicity - heart - respir. - 0_2 uptake - lung func. - age - USA - free-base

The practice of smoking cocaine, known as freebasing, has been shown to cause reduction of gas exchange in the lungs which could be harmful. Even a few months of freebasing can result in adverse pulmonary effects. Snorting the drug does not produce the same result of rapid maximum blood level (i.e., within two to five minutes). Thirteen men and six women who sought treatment for cocaine-related financial and family problems were subjected to tests of pulmonary function. Although lung capacity was normal, ten subjects suffered from shortness of breath and a poor ability to take in fresh oxygen and eliminate carbon monoxide. The findings remain to be confirmed, but at present there is reason to believe that freebasing results in loss of lung efficiency.

55 Bristow, W.J.
COCAINE ADDICTION: DOES IT CONCERN THE OTOLARYNGOLOGIST?
Annals of Otology, Rhinology and Laryngology 50: 1161-1167, 1941.

E.- gen. disc. - human - male - female - inhal. - inject. - anesth. - depression - stim. - pain - prog. drug use - crim. behav. - nose - dependence - physical dep. - psych. dep. - habit - withdrawal - USA - S. Am. - France - coca leaf - ethanol - opium - morph. - heroin - codeine

A medical doctor refutes the idea that cocaine addiction is widespread in the US and that nose and throat specialists may be responsible for starting the habit in their patients. He interviewed many physicians and discovered that none could document a single case of pure cocaine addiction. A 1933 report by the US Treasury Dept., Bureau of Narcotics, states that the amount of cocaine being smuggled into the US is negligible. The author cites other statements to the effect that cocaine addiction does not follow upon medical prescription, and that in fact users can give up the drug easily if they have to, with no physical distress. Sniffing into the nostrils is the usual means of consumption. Dr. L. Kolb is quoted as saying that cocaine addiction is very rare in the US. The author has had meagre experience of cocaine dependence in his practice. He does not believe that cocaine produces euphoria, but rather restlessness and anxiety.

56 Brodsky, J.B. and Goldwyn, R.M.
HEMODYNAMIC EFFECTS OF INTRANASAL AND I.V. COCAINE.
New England Journal of Medicine 296(17): 1008, 1977.

E. - clin. pap. - human - y. adult - adult - anesth. - toxicity - therap. use - side-effect - cardiovasc. - heart - heart rate - tachycard. - blood press. - bl. vess. - nose - age eff. - epineph. - lidocaine

The authors discuss the cardiovascular effects of cocaine as used in anesthesia. A study of patient records revealed that 86% of younger patients ($\leq$ 30 years) treated with cocaine (120-400 mg) for rhinoplasty experienced tachycardia (heart rate $\geq$ 100), but only 9% of older patients undergoing the same operation experienced the same effect. Rhytidectomy patients not treated with cocaine had no tachycardia. Higher blood pressure was also observed in the cocaine-treated group. Toxic effects can occur from as little as 30 mg. Cocaine sensitizes the heart and blood vessels to catecholamines. Sympathetic responses to epinephrine may have been potentiated by cocaine in the rhinoplasty patients. Procedures involving the use of cocaine should be monitored.

57 Brust, J.C.M. and Richter, R.W.
STROKE ASSOCIATED WITH COCAINE ABUSE-?
New York State Journal of Medicine 77(9): 1473-1475, 1977.

E. - case rep. - gen. disc. - clin. pap. - human - male - adult - exper. user - self-admin. - inhal. - s.c. - i.v. - i.m. - dose/resp. - inject. - intranasal - toxicity - therap. use - side-effect - o.d. - price - musc. weak. - seizure - reac. time - resp. depr. - brain - neurotrans. - depression - euphoria - cardiovasc. - heart - heart rate - blood press. - card. arrest - infarct. - pulse - blood - eryth. - leukocyte - hemorrhage - respir. - epineph. - urinalysis - skin - arm - leg - hypertherm. - autopsy - USA - S. Am. *Erythrox. coca* - dr. comp. amph. - heroin - LSD - methadone - ethanol

A case report is given of a 43-year-old man who had been a heroin addict for 27 years. On the day of admission he had taken a $10 bag of cocaine i.m. Within two hours, he found it difficult to speak and experienced weakness in his right leg and arm. Blood pressure was 180/130 mm Hg, respirations 16 per minute and regular, and temperature 38°C. The patient was alert but continued to have speech difficulties. The day after admission he was short of breath and developed fever (39.3°C). Tracheostomy was performed and respiratory status improved. Fever recurred four weeks after admission, but gradually subsided. He was discharged after five months, still with facial and arm weakness on the right side. The authors are unaware of any other report of stroke in a cocaine abuser. They suspect that in this case cocaine may have contributed to the stroke because it sensitizes tissues to epinephrine and norepinephrine, and like the amphetamines may therefore be associated with cerebrovascular accidents. A discussion ensues in which the history, cost, and effects of cocaine are briefly outlined. Because of its ability to produce euphoria and hallucinations, cocaine can be highly psychically addictive. Hence its increasing popularity as an illicit means of recreation. It costs from $500 to $1500 an ounce, but is usually diluted when sold on the street. The preferred route of administration is inhalation through the nostril, though it can be injected s.c. or i.m. Reactions to overdose include hypertension, hyperthermia, seizures, coma, cardiac arrest and respiratory depression.

58 Buck, A.A., Sasaki, T.T., Hewitt, J.J. and MacRae, A.A.
COCA CHEWING AND HEALTH. AN EPIDEMIOLOGIC STUDY AMONG RESIDENTS OF A PERUVIAN VILLAGE.
American Journal of Epidemiology 88(2): 159-177, 1968.

The information and key words contained in this paper have been noted elsewhere.

For annotation see: Citation 59

59 Buck, A.A., Sasaki, T.T., Hewitt, J.J. and MacRae, A.A.
COCA CHEWING AND HEALTH: AN EPIDEMIOLOGIC STUDY AMONG RESIDENTS OF A PERUVIAN VILLAGE.
Bulletin on Narcotics 22(4): 23-32, 1970.

E. - exp. pap. - human - male - female - adolesc. - y. adult - adult - exper. user - oral - epidem. - blood - hemoglob. - spleen - sex diff. - intest. - liver - hunger - skin - eye - habit - body wt. - phys. det. - S. Am. - coca leaf - Erythrox. coca - dr. comp. ethanol

Medical opinion on the effects of coca chewing on health has varied considerably. It is thought to be (a) harmful, (b) harmful but unimportant, or (c) useful. A 1950 report by the Commission of Enquiry on the Coca Leaf of the United Nations suggested that coca chewing is related to malnutrition, poor hygiene and inferior work performance. The authors conducted a study of 51 coca chewers with matched controls in the community of Cachicoto in Peru. Information was gathered by means of interviews, physical examinations, laboratory tests and skin tests. Coca chewing was frequently combined with alcohol consumption; and it was found that the presence of hepatomegaly was twice as high among chewers. Several tables give information on prevalence of chewing by age and sex, weight/height ratios for chewers and controls, serum albumin levels, cholesterol, skin conditions, intestinal parasites, history of illnesses, hemoglobin, hematocrit values, hookworm infestation and splenomegaly. Results indicate that coca chewing is indeed associated with malnutrition, poor hygiene and inferior work habits.

60 Budd, R.D.
THE USE OF DIAZEPAM AND OF COCAINE IN COMBINATION WITH OTHER DRUGS BY LOS ANGELES COUNTY PROBATIONERS.
American Journal of Drug and Alcohol Abuse 8(2): 249-255, 1981.

E. - clin. pap. - human - male - y. adult - user - oral - intranasal - price - crim. behav. - urinalysis - urine - USA - dr. comp. diazepam - opiates - barb. - amph. - methadone

Cocaine is usually snorted or ingested and acts as a short-term stimulant. Frequently abused, it is known as the "Cadillac" of recreational drugs. Los Angeles County probationers are using cocaine more often now than in the past. A survey was conducted to determine how often cocaine-using and diazepam (Valium) - using probationers use other drugs in combination. Information was gathered on about 6000 individuals, mainly males between 21 and 28 years of age, by means of urinalysis. Cocaine is metabolized into benzoylecgonine both inside and outside the body (i.e., in the sample bottle). Therefore, it will not normally be present at the time of analysis and readings of benzoylecgonine are used to indicate "cocaine positive." Three hundred and fifty diazepam-positive samples were analyzed for cocaine, and 115 cocaine-positive samples, for diazepam. In most cases (58%), diazepam was used in combination with another drug. However, cocaine was usually (73% of cases) used alone. This finding may be related to the desirable effects of cocaine and to the sophistication of many cocaine users who do not see themselves in the same category as heroin addicts. If cocaine was combined, it was most commonly (64%) with phencyclidine

(PCP) or morphine. The authors believe that the cocaine user is often unaware of taking PCP at the same time, since less expensive PCP may be used to cut the cocaine and thus enhance profits. Hypnotic sedatives were also used sometimes with cocaine, perhaps to tone down its effects.

61 Burchard, R.E.
COCA CHEWING: A NEW PERSPECTIVE.
In: Rubin, V. (ed.), _Cannabis and Culture_. The Hague: Mouton Publ., 463-484, 1975.

E. - rev. - human - exper. user - oral - toxicity - hist. of coc. - o.d. - CNS - seizure - resp. depr. - symp. NS - depression - stim. - pain - euphoria - aggress. behav. - sleep - cardiovasc. - heart rate - blood press. - pulse - respir. - hypoxia - bl. glucose - hypoglyc. - thirst - hunger - tolerance - dependence - physical dep. - psych. dep. - habit - hypertherm. - body temp. - S. Am. - coca leaf - _Erythrox. coca_ - hydrochloride

Erythroxylon coca has been cultivated in Peru for at least 4000 years. Today it is found mainly in the Andes where it is chewed by the peasants in a ritualized manner to drive away feelings of hunger, thirst and fatigue. It has often been assumed that the stimulating effects of chewing coca leaves are related to the presence of the alkaloid, cocaine. However, the author argues that there are 14 or more other alkaloids in the plant, including ecgonine, and that these may be responsible for the desirable effects sought by coca chewers. Cocaine is a CNS stimulant which, taken i.v., produces mood elevation; euphoria; decreased hunger; indifference to pain; increased physical energy and strength; rise in body temperature; initial increase in respiratory rate followed by rapid, shallow breathing; an initial rise in blood pressure which later diminishes; and higher glucose levels. Death from high doses may result because of respiratory failure. There is little evidence for tolerance, but psychological dependence is known to occur. Some researchers have believed that coca chewers learn to prefer the drug to food. Another researcher has hypothesized that coca is chewed as a reaction to hypoglycemia because coca has the immedidate effect of raising glucose levels. The author suggests that chewing coca leaf may in fact be a cultural mechanism for dealing with blood glucose homeostasis problems. However, ecgonine and not cocaine is the end product of hydrolysis and metabolism, and this may account for the relative weakness of symptoms of addiction to coca leaves. The vitamin content of the leaves may be important in counteracting the malnourishment common among Andean peasants. The peasants themselves refer to coca as a medicine and not as a food substitute.

62 Busis, S.N.
COCAINE IN ENT PRACTICE.
Drug Therapy 7(1): 133 and 138, 1977.

E. - lett. - human - therap. admin. - top. admin. - pain - nose - USA

In a question-and-answer format, one doctor asks about possible adverse effects of a combination of mineral oil and 5% cocaine spray for postoperative ENT patients. He states that he has never seen a bad reaction to cocaine in thousands of cases. The author replies that the technique is not dangerous, and that much of the recent fear of cocaine has been unwarranted. Severe reactions are rare. Maximum safe dose is 200 mg.

63 Byck, R. and Van Dyke, C.
WHAT ARE THE EFFECTS OF COCAINE IN MAN?
In: Petersen, R.C. and Stillman, R.C. (eds.), Cocaine: 1977. Rockville, MD: Dept. of Health, Education, and Welfare, Public Health Service, 97-117, 1977.

E. - book - rev. - human - oral - intranasal - anesth. - toxicity - therap. admin - biotransform. - CNS - muscle - convuls. - depression - stim. - pain - euphoria - aggress. behav. - crim. behav. - sleep - psychosis - heart - heart rate - card. arrhyth. - blood press. - bl. vess. - respir. - sex behav. - vomiting - hunger - tolerance - physical dep. - withdrawal - body temp. - dr. int. epineph.

The authors attempt to distinguish between hearsay and factual evidence on the effects of cocaine in man. The effects of any drug will vary depending on dose, setting, and psychological condition of the user. A Figure is presented which lists all the reported effects of cocaine in man, with an indication of the source of information (e.g., published research using controlled conditions, clinical literature, unreplicated experiments, animal studies not evaluated for man, single case reports, street knowledge, and myth). The authors consider only the first two types of evidence as reliable, and give a summary in discussion form of the demonstrable effects of cocaine. Locally, cocaine acts as an anesthetic. Its systemic effects include increased heart rate and blood pressure. Intranasal administration produces euphoria similar to that produced by i.v. amphetamine administration. Rate of absorption varies with route of administration, i.v. being the quickest. Within 24-36 hours after administration, most cocaine is eliminated in the urine as benzoylecgonine. The authors conclude that only a few of the actions and effects of cocaine are known definitively.

64 Byck, R., Jatlow, P., Barash, P. and Van Dyke, C.
COCAINE: BLOOD CONCENTRATION AND PHYSIOLOGICAL EFFECT AFTER INTRANASAL APPLICATION IN MAN.
In: Ellinwood, E.H., Jr. and Kilbey, M.M. (eds.), _Cocaine and Other Stimulants._ New York: Plenum Press, 629-645, 1977.

E. - exp. pap. - human - male - adult - mod. user - heavy user - _in vitro_ - top. admin. - therap. admin. - intranasal - EEG - brain - brain chem. - pain - subj. change - psychol. - euphoria - sleep - cardiovasc. - heart - heart rate - card. arrest - blood press. - EKG - GH - cortisol - urine - urinalysis - eye - free-base - hydrochloride - dr. comp. amph.

The authors investigate the relationship between blood concentrations of cocaine and physiological effects after intranasal application in man. By means of gas chromatography, plasma concentrations were determined in two groups of surgical patients (9 cardiovascular, 4 dental). A 10% solution of cocaine hydrochloride was applied topically to the nasal mucosa, and blood samples were taken before and after application. For 15-20 min after cocaine administration, plasma concentrations increased rapidly; they peaked at 15-60 min, and decreased for the next 3-5 hr. Maximum levels ranged from 120 ng/ml to 474 ng/ml calculated as the free base. They occurred later than the time of maximum euphoria reported by street users (3-5 min after application). Possibly cocaine-induced euphoria is related to rapidly increasing blood levels rather than to peak values. In another experiment, four male subjects over 21 years of age who had a history of cocaine use were monitored for blood levels and physiological changes after intranasal administration. A 10% solution of cocaine was given in doses of 0.19, 0.38, 0.75, and 1.5 mg/kg. Lower doses produced peak blood levels within 15-60 min, but the subjective high occurred somewhat earlier. Cardiovascular function was not altered. Only the larger dose caused a change in pupillary size. Many subjects fell asleep 2 to 3 hr after drug administration. Benzoylecgonine excretion in urine was detectable for as long as 36 hr after intranasal use. The authors conclude that cocaine is absorbed more slowly than expected and is eliminated for several hours after intake. Psychological high precedes peak concentrations and the drug may be hydrolyzed in the plasma as well as in the liver. The evanescent psychological experiences of street users suggest that cocaine may be taken up rapidly by brain tissue, or it may pass directly through the cribiform plate into the brain. More research is needed to understand the clinical pharmacology of cocaine and its relation to the amphetamines.

65 Byck, R., Van Dyke, C., Jatlow, P. and Barash, P.
CLINICAL PHARMACOLOGY OF COCAINE.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 250-256, 1980.

E. - book - clin. pap. - human - animal - male - acute - chronic - exp. admin. - inhal. - oral - i.v. - dose/resp. - top. admin. - intranasal - anesth. - toxicity - pharmacokin. - hist. of coc. - o.d. - CNS - EEG - reac. time - convuls. - stim. - paranoia - euphoria - dysphoria - psychosis - stom. - g.i. - intest. - cardiovasc. - heart rate - blood press. - respir. - epineph. - cancer - nose - mydr. - tolerance - - psych. dep. - physical dep. - craving - withdrawal - body temp. - hypertherm. - death - S. Am. - USA - coca paste - coca leaf - coc. crystals - free-base - hydrochloride - cannabis - tobac. - heroin

The authors consider the clinical pharmacology of cocaine in relation to type of preparation, route of administration, and dose. The form can be as a plant substance (leaves), purified or crude extract (paste), pure material (free-base), or hydrochloride (crystals, slush, or solutions). The route of administration can be oral (chewing); smoked; intranasal (most common among recreational users); i.v. (associated with hard-core users); or topical (usually for clinical use). The dose will be directly proportional to heart rate and blood pressure increases. Most overdoses are associated with the oral route, as used in massive smuggling enterprises. A table is given outlining the various cardiovascular and CNS effects of cocaine use. The authors discuss EEG changes, body temperature, acute toxicity and the question of whether or not there really is a cocaine psychosis.

66 Cagliotti, C.N.
SOME CONSIDERATIONS ABOUT THE CHEWING OF COCA LEAF IN THE ARGENTINE REPUBLIC.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 137-144, 1980.

E. - book - gen. disc. - human - dog - child - user - acute - chronic - oral - inject. - intranasal -

toxicity - therap. use - hist. of coc. - price - CNS - brain - depression - stim. - speech - cognit. - psychomot. - psychol. - concent. - euphoria - lethargy - hypoact. - delusions - cardiovasc. - heart rate - tachycard. - blood press. - pallor - blood - respir. - stom. - liver - thirst - hunger - kidney - urine - skin - bone - spine - musc. - eye - mydr. - habit - body temp. - phys. det. - USA - S.Am. - Argentina - Peru - Ecuador - Bolivia - Europe - coca leaf - hydrochloride - cannabis - ethanol - tobac. - caffeine

The author believes that part of the solution to the problem of cocaine addiction in Argentina lies in the improvement of social conditions. The controversy surrounding the issue of coca chewing has existed since 1567, and not until 1953 did an expert committee declare that the habit indeed can be considered a form of drug addiction. In 1962, an authority on coca leaf problems called the chewing habit a pernicious vice, and it was recommended that the sanitary officials publish notices on the harmful effects of long-term use. When coca is chewed, it is transformed into chloride salt in the stomach. Its presence can be detected in the blood and it is partly hydrolyzed in the liver where it is changed to ecgonine, a toxic alkaloid. Administered i.v. to dogs, cocaine travels quickly to the brain, causing stimulation and euphoria. High doses can lead to a "cocaine catatonic state." The oral route of administration gives rise to a more complex metabolic process. If 350 mg are absorbed into the bloodstream, intense CNS stimulation will ensue, but this amount is greater than that normally taken intranasally. Oddly, many coca chewers show signs of depression, possibly due to ecgonine which is eliminated through the kidneys six hours after mastication, and can reach significant levels in the circulatory system. A list of physiological effects of chewing includes: tachycardia; increased blood pressure and body temperature; stimulation or respiration; heightened tendon reflexes; resistance to fatigue; and augmented basal metabolism. Intelligence quotients diminish with a prolonged habit of coca chewing, as do attention span and mental age. Chronic chewers are repulsive, non-hygienic, clumsy, rude, pale, and dehydrated; their lips are green and they suffer from halitosis. Children who develop this habit do not learn to read, often run away from home and "become tramps." Two types of personality disturbance may be observed in chewers: the "schizotimic" who is hypoactive, introverted and unstable; and the "anaesthetic" who is slow, cold, lazy and inaccessible. The author concludes that coca chewing is an unacceptable habit causing serious mental and physical problems in Argentina.

67 Caldwell, J. and Sever, P.S.
THE BIOCHEMICAL PHARMACOLOGY OF ABUSED DRUGS. 1. AMPHETAMINES, COCAINE, AND LSD.
Clinical Pharmacology and Therapeutics 16(4): 625-638, 1974.

E. - gen. disc. - human - dog - inhal. - inject. - anesth. - therap. use - chem. - o.d. - price - CNS - tremor - convuls. - resp. depr. - brain - brain chem. - stim. - pain - euphoria - psychosis - paranoia - blood - epineph. - hunger - urine - nose - tolerance - craving - death - USA - S.Am. - coca leaf - _Erythrox._ _coca_ - dr. comp. amph.

In addition to a discussion on the biochemical pharmacology of amphetamines and LSD, the authors present a brief summary of the metabolism, pharmacology, and tolerance potential of cocaine. Cocaine is both a major local anesthetic and a CNS stimulant. It is found in the leaves of _Erythroxylon coca_ which is cultivated in South America. A drug abuser receiving 120 mg cocaine daily excreted 0.5% to 0.9% of the dose unchanged in 24 hr, with 35% to 54% as benzoylecgonine. Hydrolysis is effected by esterases. Anesthesia results from cocaine's blocking action on nerve conduction. Stimulant effects may be caused by a depression of inhibitory pathways in the brain. Small doses increase motor activity; large doses can cause loss of coordination, tremor, and convulsions. Toxic dose to man is about 1.2 g, but 20 mg has been fatal. Respiratory arrest is the cause of death. Cocaine abuse is not as widespread as it used to be, and is sometimes combined with opiates. It is usually injected or sniffed. A toxic paranoid psychosis may develop with high doses. Users crave the drug for its extremely pleasurable stimulating effects. In the West, pure cocaine abuse is rare. Tolerance develops and is difficult to lose even with interruption of dosage.

68 Caldwell, J.J.
REVIEW OF SOME OF OUR LATER REMEDIES, VIZ. COCA ERYTHROXYLON, DAMIANA, JAMAICA DOGWOOD: GYNEPHOBIA (FEAR OF WOMAN): ELECTRO-THERAPEUTICS, ELECTROCAUTERY, ELECTRICITY IN CASES OF SUSPENDED ANIMATION, ETC.
Therapeutic Gazette 1(12): 345-348, 1880.

E. - rev. - clin. pap. - human - male - female - self-admin. - oral - therap. use - CNS - depression - stim. - euphoria - sleep - sex. behav. - impotence - g.i. - thirst - hunger - habit - musc. - S. Am. - coca leaf - _Erythrox._ _coca_ - ethanol - opium

The author praises _Erythroxylon coca_ as a valuable remedy in neuro-asthenia, hysteria, opium habit and alcoholism. Cocaine is a safe, immediate, and reliable nerve tonic as well as a stimulant that has no unpleasant results. It causes mental quietude and satisfaction; easy respiration and good digestion. It adds tone and strength to the genito-urinary organs, thus acting as an aphrodisiac. It relieves fatigue and hunger. In South America, Indians chew the leaves to give them stamina for long journeys with little food. The author took more than two teaspoonfuls of diluted fluid extract, experiencing exhilaration followed by tranquillity and no special desire for more. He prescribed it to patients with gastric problems with uniform good results. He used it also in cases of influenza, colds, cough, alcoholism, and impotence, always with satisfactory results.

69 Carbajal, C.
PSYCHOSIS PRODUCED BY NASAL ASPIRATION OF COCAINE HYDROCHLORIDE.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 127-133, 1980.

E. - book - case rep. - gen. disc. - human - male - female - adolesc. - adult - mod. user - heavy user - acute - chronic - inhal. - dose/resp. - top. admin. - oral - i.v. - inject. - intranasal - toxicity - treatm. - stim. - depression - abnor. behav. - speech - psychomot. - percep. - memory - psychiat. - panic - anxiety - paranoia - euphoria - crim. behav. - aggress. behav. - motiv. - sleep - hyperact. - irritability - delusions - affect - thought disorder - interper. rel. - orientation - schizophrenia - psychosis - halluc. - aud. halluc. - vis. halluc. - tact. halluc. - person. dis. - sex. behav. - impotence - pregnancy - stom. - anorexia - musc. - eye - tolerance - psych. dep. - habit - compulsion - S. Am. - Peru - coca paste - coc. crystals - hydrochloride - dr. comp. ethanol - tobac. - cannabis

Cocaine crystals are commonly used in Peru as a form of recreation and stimulation. There is a significant population of habitual users for whom cocaine plays a major role in their way of life. Routes of administration include nasal aspiration (most common), oral, i.v. injection, and topical application (particularly to the genitals in women). Adolescents generally prefer coca paste which they may combine with marihuana or tobacco. The psychopathological disturbances caused by cocaine are usually short-lived, and therefore very few individuals seek treatment. However, in some cases these disturbances can be serious and long-lasting enough to constitute a psychosis similar to paranoid schizophrenia, characterized by tactile and other hallucinations and paranoid delusions. A case report is given of a 29-year-old man who had consumed excessive amounts of cocaine hydrochloride for ten months and became afraid of being murdered. He used the nasal route and took no other drugs except alcohol. His habit took root when he experienced the vitality, cheerfulness and optimism that cocaine made him feel after his first use. He began to consume two grams a day, and soon escalated to as much as five, eight or even 15 g on some occasions. He eventually demonstrated signs of jealousy, aggression and suspiciousness to his wife. He became restless, hyperactive, anorexic and disinclined to sleep. He became sexually aroused and enjoyed erotic fantasies, although it was difficult for him to obtain an erection. When his behaviour finally reached a stage of frightening irrationality, his wife and other relatives managed to have him admitted to a psychiatric hospital. During examination, he was cooperative despite a continued experience of auditory and visual hallucinations. However, he could not break the habit, suffered a second major psychotic episode, and was readmitted on his own request. A third episode also occurred during which he climbed to the roof of his house, almost nude, and defended himself with a carbine against imaginary enemies. He managed to remain abstinent for two years after this, but was still haunted by unfounded jealousy. This case report suggests that cocaine used chronically in high doses can precipitate paranoid psychosis; tolerance is suggested by the increase in dose; and psychological dependence is clearly shown.

70 Cārdenas, M.
PSYCHOLOGICAL ASPECTS OF COCA ADDICTION.
Bulletin on Narcotics 4(2): 6-9, 1952.

E. - gen. disc. - human - exper. user - inhal. - oral - therap. use - hist. of coc. - law - depression - stim. - euphoria - motiv. - crim. behav. - stom. - thirst - hunger - tolerance - habit - S. Am. - USA - Europe - coca leaf - Erythrox. coca - caffeine - ethanol

Cocaine, a narcotic drug subject to international control, is extracted from the coca leaf. In Peru and Bolivia, coca leaves are chewed by the Indians to alleviate hunger and fatigue. Addiction to cocaine and coca-leaf mastication are two different things, the former being a universally condemned vice, and the latter, a long-standing custom which scientific evidence has not proven to be harmful. Man's nervous system has developed in such a way that he enjoys smoking or chewing substances containing alkaloids. Erythroxylon coca can be chewed for years with no need to increase the dose to produce the same stimulating effects. The sadness and apathy of present-day South American Indians may be more of a reaction to the frustrations of their cultural development than to the coca-chewing habit. There is no evidence that this practice has lowered their mental level. It is an "ugly and filthy" habit, but not a dangerous one.

71 Carey, J.T.
COCAINE USERS: A REPRESENTATIVE CASE APPROACH.
Social Forces 60(1): 263-265, 1981.

E. - bk. rev. - human - male - heavy user - i.v. inject. - law - price - CNS - stim. - behav. - crim. behav. - mult. drug use - anxiety - appetite - USA - dr. comp. amph.

In this review of Cocaine Users: A Representative Case Approach by Spotts, J.V. and Shontz, F.C. (New York: Free Press, 1980), the author expresses disappointment in the lack of theoretical perspective in the book. For instance, a large battery of tests is administered to nine heavy users, but the authors fail to explain the purpose of all the tests. Also, no statement is made about the difference between the subjects of the study and "normals". It is also unclear in what way the nine cases are supposed to be representative. Three were middle-class; the rest were criminals. All were white males. Two reported spending up to $40,000.00/year on cocaine and all had had experience with other drugs. The book includes a spirited but unscientific discussion of the difference between amphetamines and cocaine.

72 Chambers, C.D., Russell Taylor, W.J. and Moffett, A.D.
THE INCIDENCE OF COCAINE ABUSE AMONG METHADONE MAINTENANCE PATIENTS.
International Journal of the Addictions 7(3): 427-441, 1972.

E. - clin. pap. - human - male - female - adult - exper. user - epidem. - crim. behav. - sex diff. - urinalysis - age - USA - methadone - heroin - amph.

Poly-drug use is common among methadone maintenance patients. Surveillance procedures usually screen for the presence of amphetamines and sedative-hypnotics, but not for cocaine. However, since cocaine is frequently abused by narcotic addicts, it should be looked for in urine specimens. A comparison between 32 patients who had used cocaine and 141 who had not yielded many significant differences. The mean age of cocaine abusers was 36.4 yr, whereas that of non-abusers was 32.1 yr. More blacks (65.6%) than whites (34.4%) abused cocaine. Divorced and separated persons (over 40%) abused cocaine more frequently than single (10.8%) or married ones (16.0%). Cocaine abusers (25.0%) were more often unemployed than non-abusers at the time of admission. The longer the history of drug abuse, the more likely the individual was to be using cocaine, i.e., 25.7% of those with more than ten years abuse history were detected cocaine users. Cocaine-abusing methadone patients were discovered as cheating with heroin, barbiturates and amphetamines more often than non-abusers. In summary, 19.5% of the patients studied had abused cocaine at least once during the last month. The cocaine abuser was most likely to be a black male over 35 yr old who had a history of heroin abuse for more than ten years, and who had used other drugs and committed crimes after being stabilized.

73 Chopra, I.C. and Chopra, R.N.
THE COCAINE PROBLEM IN INDIA.
Bulletin on Narcotics 10(2): 12-24, 1958.

E. - rev. - clin. pap. - human - male - female - adult - exper. user - self-admin. - oral - anesth. - toxicity - therap. use - hist. of coc. - epidem. - law - side-effect - o.d. - price - CNS - tremor - epilepsy - reac. time - coma - resp. depr. - brain - vertigo - convuls. - depression - stim. - abnor. behav. - speech - cognit. - percep. - pain - paranoia - euphoria - aggress. behav. - suicide - sleep - crim. behav. - irritability - delusions - halluc. - vis. halluc. - tact. halluc. - cardiovasc. - heart - heart rate - blood press. - pulse - respir. - sex - sex diff. - sex behav. - g.i. - constip. - thirst - hunger - anorexia - urin. freq. - skin - musc. - sweating - teeth - tongue - hearing - mouth - eye - mydr. - tolerance - habit - withdrawal - craving - death - age - body temp. - phys. det. - USA - Europe - China - India - coca leaf - Erythrox. coca - cannabis - morphine - ethanol - opium

Centuries ago the coca leaf was chewed in South America for its euphoric effects. The alkaloid cocaine was discovered in 1859-60, and its medical uses exploited after 1884. In 1890 in Peru, factories extracted crude cocaine from coca leaves for export to save the cost of shipping entire leaves. Thus, the alkaloid replaced the leaves and the drug became known in other countries including the US, India and China. In India, Erythroxylon coca has never been cultivated on a large scale. The earliest record of recreational use dates back to the late nineteenth century when restrictions on its import and sale were not carefully enforced. By 1913, it was noted that despite more rigorous control, the cocaine habit was spreading. Between the two World Wars, cocaine use was not limited to the uneducated, but also occurred among the well-to-do who sought its euphoric and aphrodisiac effects. Even women of high-class families used the drug, especially in Uttar Pradesh State. It was always taken in betel leaf which was chewed all day long. In Delhi, an estimated 5 to 20 per thousand of the population indulged in cocaine between the wars. In 1930, Calcutta customs officials seized 7200 ounces, suggesting that as much as 250,000 ounces may have actually got through. Authorities estimated that in 1929 consumers paid between 27 million and 65 million rupees for cocaine. This figure implies that there were about 250,000-500,000 habitual recreational users in India at the time. Betel-leaf sellers and women of low morals were often responsible for spreading the habit. Smuggled cocaine was adulterated frequently with phenozone, acetyl salycilate, potassium nitrate, etc. It appears that the incidence of use in India at present is not very high, but reliable statistics are not available. An analytical study of 200 cocaine eaters in India was conducted. Subjects received thorough physical examinations, and the histories and symptoms of use were recorded. All were from the lower social classes. The majority were Mohammedans (62.5%) and Hindus (34.0%). Over 90% of cases contracted the habit between the ages of 16 and 50 yr, i.e., during the most sexually active period of life. More than 60% were unmarried, and many did not live beyond the age of 40. Only seven were females. The main cause of the addiction was associated with cocaine users who often persuade others to try their drug of preference. Sexual vice and dissipation were common as well as the desire to have "a kick out of life." Prostitutes used cocaine for their own pleasure and to stimulate their clients. It was reported to alleviate fatigue and worry, and thus would appeal to weak-minded or nervous temperaments who seek mental balance. Symptoms of consumption include the following: tingling tongue; swollen lips; constricted throat; numbness in the oral cavity; dizziness; heart palpitations; warmth all over the body; hot ears; excitement and cheerfulness; mental energy; bright eyes; agreeable hallucinations; fear of the authorities; cold finger-tips; and mydriasis. The phase of stimulation generally lasts from one to two hours, though this can vary greatly among individuals. Cocaine eaters like to associate with each other when they are in the excited stage, neglecting to sleep and indulging in long debauches. Depression ensues if no further dose is taken, during which the addict may fear that the police are searching for him. The user often has the sensation of insects crawling under the skin. He has no appetite, but a very intense thirst. Dyspepsia is common as well as constipation and insomnia. Strong doses quickly lead to hallucinations, face-twitches, tremors, convulsions and higher body temperature. Paralysis, coma, and death have occurred rarely in cases of extreme intoxication.

The worst abstinence symptom is that of craving for more cocaine, which is accompanied by restlessness and irritability. Cocaine is expensive and difficult to obtain; rich users were apt to take much larger quantities than poor users. Average dose was 1/2 - 15 grains, though some persons took as much as 60 grains in one night. Persistent use interferes with the normal functions of the organs, and causes debility and anemia. Users can be recognized by their emaciated, sickly, flabby appearance and dull facial expression. Pulse rate is accelerated to 115 per minute, and respiration rate increases. The CNS is violently stimulated, sometimes to the point of epilepsy. Suicide and homicide may be committed. Despite the reputation of cocaine as an aphrodisiac, none of the 200 cases could recall any definite stimulant effect of that type. The cocaine user is generally despised in India, thought to be a person of low morals, a liar, and a criminal. The habit is very difficult to give up unless the addict has proper guidance and is removed from the environment which fosters cocaine use.

74 Claude, H.
SUR QUELQUES POISONS SOCIAUX: LA MORPHINE ET LA COCAINE. [Concerning Certain Social Poisons: Morphine and Cocaine].
Revue Scientifique 16 (August): 509-515, 1923.

F. - gen. disc. - human - male - female - adult - exper. user - intranasal - oral - anesth. - toxicity - therap. use - hist. of coc. - law - behav. -depression - stim. - abnor. behav. - speech - psychomot. - cognit. - psychiat. - anxiety - euphoria - dysphoria - aggress. behav. - suicide - hyperact. - crim. behav. - delusions - dementia - halluc. - person. dis. - reprod. tox. - stunt - pregnancy - nausea - nose - tolerance - habit - US - France - Turk. - India - Europe - U.K. - dr. comp. ethanol - dr. comp. morph.

Drug addiction may not be as serious a problem as alcoholism, syphilis, and tuberculosis, but statistics show that there are a million drug users in America, and, as of 1914, 1200 opium smokers in Paris. Therefore, it is important to address the problem. Drug use has a long history, for example, in the 17th century opium was smoked in the East. Factors which may dispose an individual to drug abuse include heredity, medical problems, and moral weakness. Use of cocaine to produce euphoria was first described by Shaw in 1885. It is sometimes taken s.c., but more often intranasally. It is an attractive drug to many because of its elegance - an odourless, white powder which does not stain. A habit can form after a few days or weeks of use. In exceptional cases, the dose may not increase significantly with time, but this is untrue for the vast majority of users. Doctors speak of four stages of cocaine intoxication: 1) Simple, Euphoric Excitation. After some disagreeable symptoms such as numbness around the nose and nausea, the neophyte will experience an intense euphoria which causes great mental and physical activity. 2) Cocaine Intoxication. This is the next stage, characterized by loud vocalization, gesticulations, talkativeness and vulgarity. It resembles drunkenness, but is said to be accompanied by greater euphoria and less confusion. 3) Chronic Intoxication. This phase occurs at the point of habit formation. Lassitude, sadness, and hallucinations result in weakened intellectual performance. 4) Cocaine Dementia. This is a psychiatric condition involving hallucinations, delirium, and the commission of crimes such as homicide and suicide. Cocaine abuse by a pregnant woman has been known to be associated with defective newborns. Besides legislative and administrative means, individual physicians and educators should make an effort to combat the spreading problem of drug abuse.

75 Cleckner, P.J.
BLOWING SOME LINES: INTRACULTURAL VARIATION AMONG MIAMI COCAINE USERS.
Journal of Psychedelic Drugs 8(1): 37-42, 1976.

E. - clin. pap. - gen. disc. - human - Black - White - male - female - adult - heavy user - inhal. - inject. - intranasal - anesth. - hist. of coc. - side-effect - o.d. - price - depression - stim. - euphoria - paranoia - sex behav. - nose - death - withdrawal - USA - dr. comp. amph. - heroin - coc. flakes

The author suggests that drug use has become an integral part of US culture rather than a distinct, marginal feature. Many users do not fit stereotyped images, with an increase in experimentation among Whites, women, and Catholics. Americans now have the option of using a wide range of drugs without necessarily altering their life-styles. Cocaine use is examined among two cultural groups in Dade County, Miami: the Black street people and the White professionals. Cocaine use per capita is greater in Miami, a major importation point, than in other big cities. It is generally cheaper there and can be bought from $400-$1500 an ounce (less expensive and poorer quality in the Black community). Many users describe the high as subtle, though some Blacks call it an "up" like that produced by the amphetamines. If it is injected, a peak is reached and runs its course within 10 min. If snorted, the peak and fall take about 20 min. Frequent users report depression and paranoia, numbness, and enhanced sexual intercourse. The average price of a gram ranges from $40-$75; this can be consumed in one night. Cocaine is a status drug because it is expensive and because the high is subtle, to be appreciated like a good wine. It is often snorted at private parties between couples. Paraphernalia in the White community include bottle, spoon, mirror, razor and straw. The author concludes that the desire to alter human consciousness is here to stay, and that people should be encouraged to use drugs intelligently.

76 Cohen, S.
COCAINE.
Journal of the American Medical Association 23(1): 74-75, 1975.

E. - rev. - human - male - female - heavy user - acute - chronic - inhal. - oral - inject. - anesth. - toxicity - treatm. - hist. of coc. - overdose - price - tremor - resp. depr. - convuls. - depression - stim. - anxiety - paranoia - euphoria - aggress. behav. - mult. drug use - delusions - psychosis - halluc. - vis. halluc. - tact. halluc. - cardiovasc. - heart rate - blood press. - bl. vess. - card. arrest - respir. - sex behav. - epineph. - skin - nose - mydr. - tolerance - withdrawal - wt. loss - death - USA - S. Am. - U.K. - dr. comp. amph. - dr. tr. barb. - dr. tr. phenothiazines

Cocaine produces a state of euphoria which the user yearns for after the high is over. Inca records show that Erythroxylon coca was chewed 3000 years ago in South America. In the Andes today, one report says that 90% of the men and 20% of the women are coca chewers. Scientific study of the drug began about 100 yr ago when cocaine was extracted from the coca leaf. In the early 20th century, many medicines and soft drinks, including Coca-Cola, contained cocaine. Injection or inhalation causes hyperstimulation, overalertness, euphoria, and a sense of power. The high is shorter-acting than that of the amphetamines. Chronic users experience depression on discontinuation of use, which may be due to depletion of norepinephrine. A habit can result from attempting to combat the depression with repeated injections. As an aphrodisiac, like amphetamines, cocaine delays ejaculation and orgasm. Negative effects of long-term use include weight loss, insomnia, anxiety, paranoia, hallucinations and delusions. Bugs may be thought to be crawling beneath the skin. As an anesthetic, cocaine causes a blockade of the transmission of painful stimuli and constriction of small blood vessels. The author states that tolerance and withdrawal symptoms do not exist, but the craving to repeat the pleasurable experience accounts for chronic use. Dilated pupils, elevated heart rate, and increased respirations are known to occur. Death can result from overdose because of cardiovascular collapse or respiratory arrest. Large amounts are smuggled into the US, especially to large cities like New York and Miami.

77 Collier, H.O.J.
SUPERSENSITIVITY AND DEPENDENCE ON COCAINE.
Nature 220(5174): 1327-1328, 1968.

E. - gen. disc. - human - brain - brain chem. - tolerance - dependence - psych. dep. - withdrawal - cell. resp. - dr. comp. amph.

Psychic dependence may occur as the result of a tip towards the reward centre of the brain. If a drug blocks the punishment centre, the balance can be tipped in favour of the reward centre. This blockade might induce a supersensitivity of pharmacological denervation giving rise to tolerance and withdrawal symptoms. Cocaine causes supersensitivity to noradrenaline. Dependence might also be explained by an improved efficiency of interaction between transmitter and its receptor.

78 Comby [No initial]
UN CAS DE MORPHINO-COCAINOMANIE GUERI PAR LA METHODE DE LA SUPPRESSION RAPIDE. [A Case of Morphine-Cocaine Addiction Cured by Sudden Withdrawal].
Société Médicale des Hôpitaux de Paris 11: 417-419, 1891.

F. - case rep. - gen. disc. - human - male - adult - heavy user - toxicity - person. dis. - skin - tolerance - dependence - withdrawal - wt. loss - wt. gain - phys. dep. - France - dr. int. morph.

The author presents an anonymous letter written to him by another doctor who had had the experience of being addicted to morphine. His state of dependence lasted for 18 mo, at which point he was taking as much as 5 g in three days. In addition, he combined 30 to 50 centigrams of cocaine with his dose. The habit resulted in dreadful physical and moral deterioration. A psychiatrist from Paris undertook his cure, subjecting him to isolation and abrupt withdrawal of the cocaine. Morphine was still given four times a day, in unknown quantities. On the eighth day of treatment, the morphine was withdrawn. The patient suffered, but not nearly as violently as he had anticipated. By the 25th day, he regained his self-possession and never again returned to the morphine-cocaine habit. Based on personal experience, he recommends above all that doctors remove their drug-abusing patients from the environment in which they originally developed the problem. He thinks it would be dangerous and cruel to withdraw morphine abruptly. The author concludes that most morphine addicts are much more difficult to cure than the anonymous letter-writer was.

79 Cooper, C.B., Bai, T.R., Heyderman, E. and Corrin, B.
CELLULOSE GRANULOMAS IN THE LUNGS OF A COCAINE SNIFFER.
British Medical Journal 386(6368): 2021-2022, 1983.

E. - case rep. - clin. pap. - human - male - adult - user - oral - inhal. - intranasal - i.v. inject. - toxicity - respir. - lungs - blood vess. - addict.

Inflammatory lesions or granulomas often appear in the lungs of drug users who inject i.v. a substance intended for oral use. A case report is given of a 26-year-old male student who presented with abdominal colic, breathlessness, cough and pulmonary granulomas. He insisted that his drug use consisted solely of sniffing cocaine and that he had not injected i.v. After some hesitation, the physicians in charge were able to believe his claim on the basis of the identification of organic fibre in the lungs. It seemed possible, after all, that the foreign material damaging the lungs could have been transmitted via the airways rather than the bloodstream.

80 Core, F.G.
THE COCA IN OPIUM-HABIT.
Therapeutic Gazette 1(7): 214, 1880.

E. - case rep. - human - male - adult - anesth. - therap. use - depression - pain - habit - suicide - morphine - quinine

A physician describes a case in which the morphine habit was relinquished by a patient who was given cocaine instead. He had originally become dependent on morphine to relieve intense pain from an amputated leg. After quitting the habit, he fell into it again years later when morphine was prescribed for malarial poisoning. The author observed the patient's gloomy and suicidal state, and prescribed coca to be taken ad libitum. As a result, the patient lost the morphine habit and became cheerful.

81 Crittenden, A. and Ruby, M.
COCAINE. THE CHAMPAGNE OF DRUGS.
Addictions 21(4): 62-74, 1974.

E. - rev. - human - animal - male - female - adult - exper. user - Black - White - inhal. - inject. - i.v. - intranasal - anesth. - toxicity - therap. use - hist. of coc. - epidem. - law - o.d. - price - CNS - reac. time -

symp. NS - stim. - psychomot. - percep. - pain - euphoria - paranoia - hyperact. - crim. behav. - body percep. - psychosis - tact. halluc. - heart rate - tachycard. - blood press. - bl. vess. - sex behav. - epineph. - hunger - thirst - skin - musc. - nose - mydr. - tolerance - dependence - physical dep. - psych. dep. - habit - withdrawal - craving - hypertherm. - body temp. - death - USA - S. Am. - coca leaf - coc. flakes - Coca-Cola - dr. comp. amph. - dr. comp. heroin - dr. comp. LSD - dr. int. epineph. - morphine - caffeine - ethanol

Between 1884 and 1887, Sigmund Freud published his papers on cocaine, praising the substance for its limitless potential to cause euphoria, relieve fatigue, and greatly diminish the need for food and drink. In the mid-1970s in America, cocaine popularity underwent a big revival. For example, federal statistics indicate a sevenfold increase in seizures between 1969 and 1974. Use is spreading among persons of all social and economic classes, no longer being confined to pimps and prostitutes. Habitual users enjoy the high without certain negative effects associated with heroin or LSD. However, they may suffer from damaged mucous membranes around the nasal passage; paranoia; psychosis; and tactile hallucinations (bugs under the skin). With very large amounts, such as an i.v. injection of one gram (1/28 oz), painful death can result. Craving for the euphoria may be termed as psychological addiction, though no evidence exists for physiological addiction or the development of tolerance. In the Andean highlands of South America, coca leaves are chewed as a means of warding off fatigue and cold. Cocaine's use as an anesthetic is based on its ability to block impulse conduction in nerve fibres to constrict blood vessels, thus preventing pain and bleeding. It inhibits the reabsorption of norepinephrine by the nerves, thus potentiating the effects of nerve stimulation such as increased heart rate. Other effects include pupil dilation, increased muscular activity and a rise in body temperature. Feelings of power are experienced, but the surge lasts only a few minutes. Users do not tend to increase their dose, even after long periods of consumption. Anecdotal evidence suggests that cocaine enhances sexual performance. Pushers rarely sell more than 60% pure cocaine, cutting it, or replacing it altogether, with Novocain, benzocaine, codeine, sugar, etc. The original Coca-Cola, introduced in 1888, contained some cocaine until its removal from the beverage in 1903. Drug laws now impose five years for sale or possession federally, and 15 yr to life in New York State. These laws cannot always compete with the drug's popularity due to its fantastically high price; dealers stand to make a 500 per cent profit on a successful transaction, and couriers, as much as $100,000 for smuggling 9 kg into the US. It is suggested that at this point it might be more useful to study the effects of cocaine than to attempt to control it.

82 Cronson, A.J. and Flemenbaum, A.
ANTAGONISM OF COCAINE HIGHS BY LITHIUM.
American Journal of Psychiatry 135(7): 856-857, 1978.

The information and key words in this paper are essentially the same as those published elsewhere.

For annotation see: Citation 83

83 Cronson, A.J. and Flemenbaum, A.
ANTAGONISM OF COCAINE HIGHS BY LITHIUM.
In: Schecter, A.J. (ed.), Drug Dependence and Alcoholism, Vol. 1. New York: Plenum Press, 1139-1141, 1981.

Five brief case reports are given to indicate that lithium administration may be effective in suppressing the high produced by cocaine as well as that produced by amphetamines. Four were adult males with previous addictions to heroin, alcohol and hypnotics. In each case, the subject reported trying to get high on cocaine without success while undergoing lithium treatment. The fifth case, a 32-year-old white actress, was discovered to have periodically abandoned her lithium treatment in favour of enjoying cocaine. She said cocaine would not get her high if she was on lithium medication. The authors conclude that lithium should be considered as a potential inhibitor of drug highs.

84 Crothers, T.D.
COCAINISM.
Quarterly Journal of Inebriety 32(1): 78-84, 1910.

E. - case rep. - gen. disc. - clin. pap. - human - adult - male - heavy user - therap. admin. - anesth. - toxicity - law - CNS - brain - anxiety - depression - stim. - abnor. behav. - psychomot. - cognit. - pain - paranoia - euphoria - aggress. behav. - suicide - homicide - crim. behav. - prog. drug use - delusions - thought disorder - confusion - mania - person. dis. - anemia - eye - dependence - withdrawal - craving - USA - dr. comp. ethanol - dr. comp. morph. -dr. comp. opium

Cocaine is a true analgesic which depresses nerve conduction and cuts off the transmission of impulses. It effects perfect relief from discomfort, worry and fatigue, causing the user to feel vigorous and alert. Therapeutically, it may be prescribed as an antidepressant or as a pain-killer. Withdrawal results in gloom and bewilderment which can only be remedied by another dose. Cocaine also relieves catarrhs, bronchial problems and exhaustion due to starvation or poisoning. It seems to be more addictive than alcohol or opium, and is popular among the ill-fed degenerate classes. The cocaine taker frequently commits crimes, including homicide, and is very shrewd in his ability to procure the drug. His craving amounts to an insane mania. Delusions of persecution combined with the desire for revenge are marks of cocainism. Among literary circles, cocaine is used to exalt the ego, to give feelings of strength and power, and to help the user to write in a smooth, flowing fashion. The only negative effects on health appear to be anemia and a tendency to staring, suspicious eyes. Cocaine is a dangerous drug, despite the praise given to it by physicians. Its sale should be stopped, except for legitimate therapeutic purposes. Soda drinks containing cocaine are popular and difficult to suppress. The cocaine taker often gives himself away by odd behaviours, such as, in one case, having all the locks changed in his house for no particular reason. Its use is probably more widespread in the US than is generally realized.

85 Crowley, T.J.
CAUTIONARY NOTE ON METHYLPHENIDATE FOR COCAINE DEPENDENCE.
American Journal of Psychiatry 141(2): 327, 1984.

E. - lett. ed. - case rep. - human - user - chronic - law - dose/resp. - treatm. - stim. - psychosis - neurol. - dependence - dr. tr. amph.

In this letter to the editor, the author discusses the problem of treating victims of cocaine abuse. Doctors must be careful about the legal ramifications of prescribing habituating drugs (such as stimulants) to drug abusers. Abstinence was shown to be an 80% effective treatment in one study involving 32 patients, including one individual who reported prior recreational use of 45 g cocaine a week. In addition to possible legal problems, stimulant prescription can lead to psychosis or neurological abnormalities. Therefore, it would not be wise to automatically treat cocaine abusers with stimulants based on one impressive case report (see: Khantzian, E.J., An Extreme Case of Cocaine Dependence and Marked Improvement with Methylphenidate Treatment. Am. J. Psychiatry 140(6): 784-785, 1983).

86 de Takāts, G.
THE INDISPENSABLE USES OF NARCOTICS IN LOCAL ANESTHESIA.
Journal of the American Medical Association 96(15): 1228-1229, 1931.

E. - clin. pap. - human - animals - dose/resp. - inject. - i.v. - therap. admin. - top. admin. - anesth. - toxicity - side-effect - o.d. - CNS - vertigo - resp. depr. - convuls. - pain - memory - anxiety - sleep - cardiovasc. - blood press. - tachycard. - card. arrest - blood - respir. - pallor - allergy - epineph. - thyroid - nausea - intest. - liver - skin - spine - nose - eye - hangover - death - coc. mud - cocaine hydrochloride - procaine hydrochloride - caffeine - morph. - opium - barb. - quinine

The use of narcotics, including cocaine, is discussed in local anesthesia with a view to minimizing danger to the patient. Fatalities associated with anesthesia have been reported, some of which were avoidable. Barbituric acid derivatives offer some protection from the toxicity of cocaine if applied before local anesthesia. The first real local anesthetic, cocaine should be used only on the surface of eye, nose, and larynx. It should never be injected into the tissues. Physicians who use larger than necessary concentrations (i.e., more than 2-5% for the eye, or 5-10% for the nose) cannot claim an unavoidable accident in case of fatality. Cocaine mud was contraindicated by the committee for the study of the toxic effects of local anesthesia. Procaine hydrochloride is about one tenth as toxic as cocaine, and can be used in most instances instead of cocaine. The higher the drug concentration, the more rapid the absorption. Therefore, minimal doses should be employed. Epinephrine added to cocaine can slow down absorption, prolong anesthesia, and reduce toxicity. Cocaine and its derivatives are rapidly detoxified, mainly in the liver. Some individuals are hypersensitive to the drug, and will experience toxic symptoms such as pallor, dizziness, nausea, tachycardia, convulsions, and cyanosis. It is not known whether or not these symptoms stem from a true allergy. Death results from respiratory and circulatory depression.

87 DiMaio, V.J.M. and Garriott, J.C.
FOUR DEATHS DUE TO INTRAVENOUS INJECTION OF COCAINE.
Forensic Science International 12(2): 119-125, 1978.

E. - case rep. - clin. pap. - human - male - female - y. adult - exper. user - heavy user - White - acute - chronic - inhal. - i.v. - dose/resp. - inject. - therap. use - top. admin. - intranasal - anesth. - toxicity - o.d. - price - CNS - tremor - reac. time - coma - resp. depr. - brain - convuls. - stim. - abnor. behav. - vocaliz. - percep. - pain - paranoia - euphoria - aggress. behav. - delusions - psychosis - halluc. - cardiovasc. - heart - heart rate - tachycard. - blood press. - bl. vess. - blood - spleen - respir. - rhinitis - lungs - pulm. ed. - hypoxia - nausea - liver - kidney

- urine - nose - arm - mydr. - tolerance - death - body temp. - autops. - USA - coca leaf - coc. flakes - Erythrox. coca - dr. comp. heroin - methaqualone

A powerful psychotropic drug, cocaine has therapeutic and abuse potential. Recreational use in the US was limited until the 1970s when it became popular, especially among entertainers. Four case reports of deaths due to i.v. injection are given. The first, a 19-year-old white male, was discovered by his parents trembling and shaking, and experienced convulsions before death. Autopsy revealed several needle marks in both arms and the presence of cocaine in blood, urine, etc. The second, a 19-year-old white female, went into convulsions in the courtyard of her apartment, was taken to hospital, lost consciousness, and died nine days later. Neurological examinations indicated irreversible, widespread, hypoxic brain damage. She was found to have had a year-long history of i.v. cocaine injection, partly in evidence from the needle tracks on her wrist and arms. The third case, a 28-year-old white female, died in her boyfriend's bathroom beside a syringe and a bottle containing 74% cocaine. Autopsy showed eight needle puncture sites, pulmonary edema, and the presence of cocaine in blood, urine, etc. The fourth, a 26-year-old white female, died in the bathtub, having recently injected cocaine. No other drug was detected at autopsy. Cocaine is an alkaloid obtained from the leaves of the shrub Erythroxylon coca, which has anesthetic and vasoconstrictive properties. It also acts as a CNS stimulant, increasing heart rate, blood pressure, respiratory rate and body temperature. Peak effects occur 5-10 min after i.v. administration, and 15-20 min after intranasal use. Street cocaine averages 53%-63% pure, usually cut with sugars or local anesthetics. Users in the US typically snort 25-30 mg at a time. Heavy abusers take repeated doses for long periods, which can result in psychosis. Use is limited, however, by the drug's high price. Euphoria and heightened self-confidence result from acute intoxication. The user is restless, talkative, and free from fatigue. Paranoia and delusions of grandeur accompany large doses. Rhinitis results from chronic sniffing as well as frequent nose-bleeds. There is some recent evidence for tolerance to the convulsive and cardiorespiratory effects. Chronic, long-term use is associated with malnutrition, exhaustion, debilitation, violence and hallucinations. When death occurs, it is usually due to respiratory paralysis.

88 DiPalma, J.R.
COCAINE ABUSE AND TOXICITY.
American Family Physician 24(5): 236-238, 1981.

E. - clin. pap. - human - user - inhal. - oral - i.v. - inject. - top. admin. - intranasal - anesth. - toxicity - therap. use - o.d. - price - CNS - tremor - coma - symp. NS - convuls. - depression - stim. - paranoia - euphoria - halluc. - vis. halluc. - tact. halluc. - cardiovasc. - heart rate - tachycard. - blood press. - hypertens. - bl. vess. - card. arrest - blood - hypoglyc. - liver - vomiting - urine - nose - mydr. - tolerance - phys. dep. - hypertherm. - death - body temp. - USA - S. Am. - Erythrox. coca - coca leaf - hydrochloride - free-base - dr. comp. amph. - dr. comp. phencycl. - mannitol - sucrose - lactose - caffeine - talc - heroin - procaine - lidocaine - strychnine - dr. tr. dextrose - dr. tr. naloxone - dr. tr. propanolol - dr. tr. sodium nitro-prusside - dr. tr. phentolamine - dr. tr. diaz.

The caviar of recreational drugs, cocaine now sells for about $100 per gram in the US. It is usually adulterated with sucrose, caffeine, talc, etc., and is snorted by pleasure-seekers. Free-base smoking is dangerous because a safe dose is easily exceeded. Cocaine can be injected i.v. or applied to any mucous membrane. Oral ingestion of large amounts can result in death, for example, when a cocaine-filled condom ruptures in the abdomen of a smuggler. The extent of illicit trade in the US is unknown, but certainly millions of dollars are involved. Erythroxylon coca, a plant indigenous to Peru and Bolivia, is the source of cocaine and is chewed by the natives to ward off fatigue. Both a local anesthetic and a CNS stimulant, cocaine is used recreationally for its euphoric effects. Increasing doses cause restlessness, excitement, tremor, convulsions, increased body temperature, tachycardia, hypertension, emesis, coma and death. Cocaine is the only local anesthetic known to cause vasoconstriction and mydriasis upon local application. Even used therapeutically, it is treacherous because some individuals are hypersensitive to it and a standard dose may be fatal. Cocaine toxicity resembles amphetamine poisoning, and is recognized by perforated nasal septum, headache, hyperactive bowel sounds, muscle tremors, paranoia and tactile hallucinations (cocaine bugs). There is a more rapid return to a normal physical state, with a delay in return to normal mentation, than in amphetamine or phencyclidine poisoning. Tolerance develops but physical dependence does not. Fatal oral dose is reported at 500 mg, but death may occur after only 20 mg given i.v. Suggestions are made for treatment of cocaine poisoning.

89 Domic, Z.
CRITICAL-BIBLIOGRAPHIC REVIEW AND GENERAL CONSIDERATIONS ABOUT COCA CHEWING.

In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 170-174, 1980.

E. - book - gen. disc. - rev. - human - user - chronic - oral - toxicity - hist. of coc. - chem. - psychomot. - cognit. - percep. - hypotens. - cancer - hypoxia - hunger - body temp. - phys. det. - S. Am. - Peru - Bolivia - coca leaf

The author calls for more research to be done on the effects of coca chewing, emphasizing that coca is not necessarily synonymous with cocaine. The effects of the alkaloid consumed in its natural condition may be different from those produced by a purified extract. A look at the literature reveals longstanding controversy between those who condemn, and those who condone, the practice of chewing coca leaves. There are 13 other alkaloids in coca besides cocaine which should be studied, along with the question of whether or not coca chewing helps in coping with high altitude living. Some researchers have cited beneficial effects such as relief from hunger and fatigue, increased work output, and better performance in manual labour. Others, on the other hand, claim that coca chewing can cause a loss of intellectual powers, anorexia, immorality and general deterioration.

90 Eddy, N.B., Halbach, H., Isbell, H. and Seevers, M.H.
DRUG DEPENDENCE: ITS SIGNIFICANCE AND CHARACTERISTICS.
Bulletin of the World Health Organization 32: 721-733, 1965.

This paper is identical to another published elsewhere. For annotation see: Citation 91

91 Eddy, N.B., Halbach, H., Isbell, H. and Seevers, M.H.
DRUG DEPENDENCE: ITS SIGNIFICANCE AND CHARACTERISTICS.
Psychopharmacology Bulletin 3(3): 1-12, 1966.

E. - gen. disc. - human - animal - user - heavy user - acute - chronic - inhal. - oral - i.v. - dose/resp. - anesth. - toxicity - therap. use - convuls. - depression - stim. - paranoia - euphoria - aggress. behav. - sleep - depression - stim. - paranoia - euphoria - aggress. behav. - sleep - delusions - halluc. - aud. halluc. - vis. halluc. - tact. halluc. - blood - nausea - hunger - anorexia - musc. - mouth - nose - tolerance - dependence - physical dep. - psych. dep. - withdrawal - sensitization - death - phys. det. - S. Am. - coca leaf - coc. crystals - morph. - barb. - ethanol - cannabis - amph. - khat - LSD

The authors define drug addiction as an individual's dependence, physical or psychic or both, on a chemical agent. There are several types of dependence, such as the morphine, barbiturate-alcohol, alcohol, cocaine, cannabis, amphetamine, khat and hallucinogen type. Each is discussed separately. Cocaine is known for its ability to produce euphoric excitement and auditory, visual, and tactile hallucinations. Users do become psychically, but not physically, dependent. For centuries Andean Indians have chewed coca leaves to relieve cold, fatigue and hunger. In the past, it was used therapeutically on oral and nasal lesions. Snuffing crystals is one means of obtaining great psychic effects, but the most powerful and most dangerous is that of i.v. injection. Frequent users may inject as often as every ten minutes to achieve ecstatic thrills, feelings of muscular strength, and exaggerated self-confidence. Antisocial acts may be committed as a result of paranoia and hallucinations. Possible adverse effects include nausea, lack of appetite, insomnia and convulsions. The stimulating effects are counteracted by some users with morphine, heroin, or some other depressant drug. There is no characteristic syndrome associated with abrupt withdrawal, but the user may experience depression and lingering delusions. Some individuals have been known to consume as much as 10 g daily; lethal dose is not known. There is no tolerance in man or animals. In fact, in some cases sensitization occurs, i.e., the effects are enhanced with repeated use attaining the same blood levels.

Also reprinted in:
Bulletin of the World Health Organization 32: 721-733, 1965.

92 Egan, D.J. and Robinson, D.O.
COCAINE: MAGICAL DRUG OR MENACE?
International Journal of the Addictions 14(2): 231-241, 1979.

E. - gen. disc. - human - animal - monkey - adult - user - heavy user - Black - acute - inhal. - oral - i.v. - inject. - intranasal - anesth. - toxicity - therap. use - hist. of coc. - epidem. - law - o.d. - reac. time - resp. depr. - convuls. - depression - stim. - cognit. - vocaliz. - paranoia - euphoria - aggress. behav. - homicide - schizophrenia - psychosis - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - heart rate - blood press. - card. arrest - respir. - lungs - liver - jaundice - skin - nose - tolerance - dependence - physical dep. - psych. dep. - withdrawal - death - USA - Europe - S. Am. - coca leaf - Coca-Cola - morph. - amph. - heroin

Opinions about cocaine have varied throughout history, ranging from very favourable to condemnatory. The most extensive use has been that of the South American Indians, millions of whom chew coca leaves through their adult lives. Sigmund Freud praised the drug for its value in treating depression, asthma, and morphine withdrawal. In the late nineteenth century, cocaine continued to be popular in Europe and the US, especially in the patent medicines and beverages such as Coca-Cola. By the early twentieth century, however, the lawful distribution of cocaine was limited to physicians and its use for non-medical reasons was associated, perhaps unjustifiably, with poor Blacks prone to violence. Its popularity increased again in the 1970s in the US, where 3.2% of the adult population has had some experience with it. Snorting and i.v. injection are the two most common routes of administration nowadays. A typical snorted dose is about 200 mg, whereas heavy users may inject up to 10g/day. It is generally held that tolerance and physical dependence do not occur, and it is difficult to tell how strong the psychological dependence is since users are frequently forced to abstain simply because the drug is not available. Physical effects include rise in heart rate and blood pressure. Intravenous use may cause infection and damaged veins, and snorting may cause stuffiness in the nasal passages. Used with heroin, cocaine may lead to liver damage. There has also been a report of heavy cocaine use being associated with a respiratory problem called "frozen lung." Overdose can cause death due to respiratory failure and cardiac arrest. Euphoria lasts for about 30 min after a dose of 50 to 250 mg. The user may become active and talkative, experiencing auditory, visual, olfactory and tactile hallucinations ("formication"). The most severe psychological problem resulting from high chronic doses is that of acute paranoid schizophrenia. During cocaine psychosis, violent acts such as homicide may be committed. The authors conclude by advising caution to recreational cocaine users until more is known about the drug.

93 Eiswirth, N.A., Smith, D.E. and Wesson, D.R.
CURRENT PERSPECTIVES ON COCAINE USE IN AMERICA.
Journal of Psychedelic Drugs 5(2): 153-157, 1972.

E. gen. disc. - human - heavy user - acute - chronic - self-admin. - inhal. - oral - i.v. - inject. - dose/resp. - therap. admin. - top. admin. - anesth. - toxicity - therap. use - hist. of coc. - law - o.d. - price - CNS - tremor - reac. time - coma - resp depr. - brain - vertigo - convuls. - depression - stim. - vocaliz. - anxiety - paranoia - euphoria - mult. drug use - vocaliz. - anxiety - paranoia - euphoria - mult. drug use - irritability - confusion - psychosis -

halluc. - tact. halluc. - aud. halluc. - vis. halluc. - heart - blood press. - card. arrest - pulse - respir. - aphrodisiac - nausea - liver- vomiting - dry mouth - hunger - anorexia - urine - skin - musc. - teeth - nose - eye - dependence - physical dep. - psych. dep. - death - USA - Europe - S. Am. - coca leaf - Erythrox. coca - Coca-Cola - dr. comp. amph. - dr. int. heroin - dr. tr. diaz. - morph. - opium - barb. - cannabis

Sigmund Freud praised cocaine for its therapeutic potential and self-administered small doses regularly as an antidote to depression and indigestion. Yet the same drug has been condemned as the "third scourge of mankind," and associated with ghetto dwellers and social outcasts. Illicit distribution in the US is increasing today as many persons seek the thrill of cocaine-induced euphoria. Erythroxylon coca, the botanical genus from which cocaine is derived, has been cultivated in South America since the time of Incan civilization. The leaves are chewed with lime to alleviate hunger and fatigue, apparently producing no physical dependence or other serious adverse effects. After writing a series of laudatory papers on cocaine between 1884 and 1887, Freud became disillusioned when chronic use by a friend led to a full-fledged psychosis with tactile hallucinations ("white snakes creeping over his skin"). Once it gained fame as a local anesthetic in 1884, cocaine was also used in many patent medicines and beverages such as Coca-Cola. In 1906, the Pure Food and Drug Act in the US attempted to control cocaine use, and in 1914 the Harrison Narcotic Tax Act legally classified the drug as a narcotic. Thus it lost its popularity temporarily, and in the 1920s was used almost exclusively by jazz musicians and affluent ghetto dwellers. Only in the early 1970s did it once again emerge as a popular drug among all socioeconomic classes, even though illegal possession and distribution are punishable as a felony. It sells on the street for $500 to $1500 an ounce or $50 a gram. Lack of quality control results in widespread adulteration so that users are often unaware of the true contents of what they have purchased. Snorting and injection precipitate about 20 min of exhilaration and euphoria, similar to those following amphetamine use. Cocaine heightens physical and mental energy and acts as an aphrodisiac. These pleasurable sensations may be followed by a reaction of irritability, depression, and muscle tightening. Users will continue to self-administer as frequently as every 10 min in order to maintain the high, or they will mix heroin with the cocaine. They are often polydrug users who experiment also with marihuana, amphetamines, barbiturates and tranquillizers. Heavy snorting causes damage to the nasal mucous membranes and chronic nose-bleeds. Eventually the pleasurable effects give way to anxiety, paranoia and auditory and visual hallucinations. The CNS stimulation begins in the cortical cells of the brain; with increased dose, the lower centres react and tremors, convulsions and shallow, rapid breathing ensue. Psychological dependence takes the form of a compulsion to continue use in order to avoid the depression accompanying abstinence. Lethal dose after oral ingestion is 1200 mg, but as little as 30 mg can cause death after application to mucous membranes. Absorption is quick, despite vasoconstriction, and detoxification takes place in the liver. Acute poisoning is recognized by restlessness, talkativeness, anxiety, confusion, increased pulse and respiration, nausea, vomiting, convulsions, coma, and death due to respiratory or cardiac arrest.

94 Eysenck, H.J.
FREUD AND COCAINE - THE FREUDIAN FALLACY.
Behaviour Research and Therapy 22(3): 328, 1984.

E. - bk. rev. - hist. of coc. - male - adult - user - addict. - abnor. behav.

The author gives a favourable review to the book by E.M. Thornton, Freud and Cocaine - The Freudian Fallacy (London: Blond & Briggs, pp. 340, 1983). Freud was known to experiment with cocaine in his youth and to use it more frequently as an adult. His unusual and odd behaviours are examined in light of his cocaine addiction. The book is described as "learned" and "academically-acceptable," but "astonishing."

95 Fairbanks, D.N.F. and Fairbanks, G.R.
COCAINE USES AND ABUSES.
Annals of Plastic Surgery 10(6): 452-457, 1983.

E. - rev. - case rep. - human - male - female - user - acute - chronic - inhal. - oral - i.v. inject. - top. admin. - intranasal - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - o.d. - CNS - tremor - seizure - coma - resp. depr. - convuls. - stim. - vocaliz. - paranoia - euphoria - aggres. behav. - homicide - suicide - psychosis - delusions - aud. halluc. - vis. halluc. - tact. halluc. - heart rate - tachycard. - blood press. - card. arrhyth. - card. arrest - pulse - blood - respir. - epineph. - nausea - vomiting - liver - nose - death - USA - S. Am. - coca leaf - free-base - dr. comp. amph - dr. tr. diaz. - dr. tr. thiopental - dr. tr. pentobarb. - dr. tr. barb. - dr. tr. propan. - dr. tr. lidocaine

A brief history of cocaine is given, outlining its use by the Andean Indians as long ago as 6 A.D., its short-lived popularity with Sigmund Freud, and its early therapeutic use as an anesthetic in surgery. In the USA, cocaine was present in many tonics and beverages until passage of the Harrison Act in 1914 prohibiting its distribution. Only in the 1970s did its use become widespread once more. Pharmacological effects can include rapid heart rate, arrhythmias (irregular beat), high blood pressure and cardiac arrest. As a stimulant, like the amphetamines, cocaine produces euphoria, talkativeness, excitement, restlessness and delay of fatigue. Less desirable consequences are tremors, tonic/clonic convulsions (i.e., muscle spasms), and apnea (absence of breathing). Death resulting from very small doses may be associated with pseudocholinesterase deficiency. It has not been possible to establish an absolute maximum safe dose. The generally cited estimate is 200 to 300 mg, but adverse reactions including respiratory arrest and convulsions have occurred at lower levels. In fact, six fatalities have been reported anecdotally from less than 200 mg cocaine applied as an anesthetic. A case report of one male and one female cocaine user is given to illustrate such toxic reactions as seizures, coma, psychosis, hallucinations and paranoia. Management procedures in cases of overdose are discussed. Recreational users tend to prefer the intranasal route of administration (snorting) and consume about 25 to 30 mg per "line" if the drug is pure. Nasal problems common among sniffers include crusting, irritation, dryness, septum perforation and bleeding. Binging on cocaine is associated with violence, homicide and suicide; this association, perhaps more than anything else, has made the drug socially unacceptable in the US.

96 Fennell, W.H., Fischman, M.W., Schuster, C.R. and Resnekov, L.
CARDIOVASCULAR EFFECTS OF COCAINE.
New England Journal of Medicine 295(17): 960-961, 1976.

E. - lett. ed. - exp. pap. - human - animal - primate - male - exper. user - acute - exp. admin. - i.v. - inject. - dose/resp. - toxicity - cardiovasc. - heart rate - tachycard. - blood press. - EKG - body temp. - dr. comp. amph. - dr. tr. propanolol

The authors studied the physiological, behavioural and subjective effects of cocaine in 12 male volunteers with a history of drug abuse. A dose-related rise in heart rate and blood pressure was found after 8, 16 and 32 mg, returning to normal within 45 min. There was no change in body temperature. Many of the subjects noticed a similarity in effect between i.v. injected dextroamphetamine and the cocaine they had shot up on the street. Possibly the street cocaine was cut with amphetamine. The authors conclude that in most cases acute cocaine use should not lead to cerebrovascular accidents. Other agents should be suspected if toxic cardiovascular or thermal signs persist.

97 Finkle, B.S. and McCloskey, K.L.
THE FORENSIC TOXICOLOGY OF COCAINE.
In: Petersen, R.C. and Stillman, R.C. (eds.), Cocaine: 1977. Rockville, MD: Dept. of Health, Education, and Welfare, Public Health Service, 153-192, 1977.

This paper was reprinted elsewhere.
For annotation see: Citation 98

98 Finkle, B.S. and McCloskey, K.L.
THE FORENSIC TOXICOLOGY OF COCAINE (1971-1976).
Journal of Forensic Sciences 23(1): 173-189, 1978.

E. - survey - human - primate - male - female - y. adult - exper. user - Black - White - inhal. - oral - i.v. - inject. - dose/resp. - intranasal - toxicity - o.d. - CNS - tremor - seizure - reac. time - coma - resp. depr. - brain - vertigo - convuls. - depression - stim. - psychiat. - aggress. behav. - suicide - homicide - crim. behav. - mult. drug use - confusion - cardiovasc. - heart - heart rate - tachycard. - blood press. - card. arrest - blood - respir. - sex - sex diff. - epineph. - liver - urine - nose - death - age - autops. - USA - Canada - dr. int. morph. - ethanol - heroin - lidocaine - barb. - methadone

The recent upsurge in the popularity of cocaine as a recreational drug prompted the authors to study its role in a number of sudden deaths. Fatalities associated with cocaine were reported as early as 1891, indicating the potential toxicity of its CNS-stimulating effects. Excitement and confusion are followed by depression involving medullary centres, resulting in respiratory failure. Tachycardia, increased blood pressure and vasoconstriction constitute additional health hazards. Very rapid death can occur with i.v. doses which affect heart muscle function. The authors collected reports of 111 cases of unexplained death involving cocaine from Canada and the US for the years 1971-1976. Many cases came from New York City and Los Angeles. Death was determined to be caused by cocaine alone in 26 cases. The majority of cases were young, white males less than 30 yr old. The male:female ratio was about 3:1. Medical and psychiatric histories showed that most of the individuals were relatively healthy before their demise, but 61.3% had had emotional or behavioural problems associated with drug abuse. The most commonly detected drug along with cocaine was morphine as a result of heroin use (33% of cases). Twenty-three cases had a known, documented history of cocaine abuse. Among the cocaine-only deaths, 22.9% were suicides; 61.5% had injected i.v.; 15.4% had ingested the drug orally; and 7.7% had taken it intranasally. It is erroneous, therefore, to consider this latter route of administration safe. Almost two-thirds of the victims died in less than five hours, and most of these within one hour after drug intake. Thirteen of the 26 cocaine-only deaths were ascertained to have occurred as a result of seizures, respiratory arrest, coma and cardiac arrest. Oddly, not one of the deceased had a perforated nasal septum. The authors conclude that cocaine abuse entails serious consequences, and that the drug's proper place is only in the field of medicine.

99 Fischman, M.W., Schuster, C.R., Resnekov, L., Shick, J.F.E., Krasnnegor, N.A., Fennell, W. and Freedman, D.X.
CARDIOVASCULAR AND SUBJECTIVE EFFECTS OF INTRAVENOUS COCAINE ADMINISTRATION IN HUMANS.
Archives of General Psychiatry 33: 983-989, 1976.

The experiment described in this paper was published elsewhere. For annotation see: Citation 100

100 Fischman, M.W., Schuster, C.R. and Krasnegor, N.A.
PHYSIOLOGICAL AND BEHAVIORAL EFFECTS OF INTRAVENOUS COCAINE IN MAN.
In: Ellinwood, E.H., Jr. and Kilbey, M.M. (eds.), Cocaine and Other Stimulants. New York: Plenum Press, 647-664, 1977.

E. - book - exp. pap. - human - animal - rabbit - dog - primate - cat - male - adult - exper. user - exp. admin. - i.v. - inject. - dose/resp. - toxicity - o.d. - CNS - reac. time - behav. - depression - stim. - subject. change - euphoria - paranoia - heart rate - tachycard. - blood press. - EKG - respir. - anorexia - urine - hearing - tolerance - physical dep. - psych. dep. - sensitization - hypertherm. - body temp. - USA - dr. comp. amph.

Scientific investigations of the effects of cocaine in man are scarce, despite a high incidence of abuse in the US. Cocaine is a local anesthetic and a CNS stimulant which can produce psychological dependence. Tolerance does not appear to develop; rather, in fact, supersensitivity to the drug's effects has been demonstrated in both animals and man. The toxic syndrome following long-term cocaine abuse is like that following prolonged amphetamine abuse. It includes bruxism, enhanced physical and mental energy, anorexia, picking on face and extremities, repetitious behaviours and paranoia. The authors studied nine male experienced cocaine users aged 21-35 yr. Physiological measures were taken of blood pressure, heart rate, EKG, body temperature and respiration. Cocaine was administered i.v. three or four times per week, never more than once a day, in doses of 4, 8, 12, 16, 20 and 24 mg. It was found that cocaine invariably caused a dose-related increase in heart rate and blood pressure. Subjects discriminated accurately between cocaine and placebo but not always between cocaine and amphetamine. Increasing doses of cocaine had a positive effect on friendliness, amphetamine-like feelings and vigour. The experimental equipment proved to be inadequate for measuring effects on respiration and no body temperature changes were recorded. In conclusion, the stimulant actions of cocaine were seen to be similar to those of the amphetamines in this experiment.

101 Fischman, M.W. and Schuster, C.R.
COCAINE EFFECTS IN SLEEP-DEPRIVED HUMANS.
Psychopharmacology 72(1): 1-8, 1980.

E. - exp. pap. - human - animal - male - female - adult - acute - exp. admin. - inhal. - i.v. - dose/resp. - inject. - intranasal - reac. time - behav. - depression - stim. - subj. change - anxiety - paranoia - euphoria - sleep - confusion - cardiovasc. - heart rate - blood press. - EKG - respir. - sex diff. - body temp. - nose - dr. comp. amph.

The effects of sleep deprivation were monitored with and without cocaine. Eight normal healthy volunteers, five male and three female, aged 21-30 yr, performed a work-output task and a reaction-time task after 24 hr and 48 hr of no sleep. Inhalation of cocaine reversed the effect of diminished reaction-time performance produced by lack of sleep. Cocaine caused an increase in heart rate both in the sleep and no-sleep conditions, but this increase was not as great when subjects had not slept for 48 hr. Descriptions of cocaine effects resembled those reported for amphetamine. There was no immediate postdrug depression, although some rebound effects were observed 8 hr after drug intake. Experimental administration of 96 mg was rated as equivalent to a high street dose. In terms of heart rate and blood pressure measures, 8-16 mg cocaine seemed to be comparable to 10 mg d-amphetamine. Subjects have difficulty in telling the two drugs apart after i.v. injections. Both cocaine and amphetamine help to improve performance which has deteriorated because of fatigue.

102 Fischman, M.W. and Schuster, C.R.
EXPERIMENTAL INVESTIGATIONS OF THE ACTIONS OF COCAINE IN HUMANS.

In: Jerī, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 62-75, 1980.

E. - book - exp. pap. - human - animal - primate - adult - exper. user - in vivo - acute - chronic - exp. admin. - inhal. - i.v. - dose/resp. - inject. - intranasal - toxicity - epidem. - law - price - EEG - reac. time - convuls. - subj. change - psychol. - anxiety - euphoria - sleep - cardiovasc. - heart rate - blood press. - card. arrhyth. - anorexia - tolerance - sensitization - death - USA - dr. comp. amph. - dr. comp. heroin

There is reason to believe that the recreational use of cocaine is increasing in the US, partly because of a dwindling supply of street amphetamine. For example, a 1975 publication of the Addiction Research Foundation of Ontario stated that whereas the number of known heroin users had increased by only 13%, the number of known cocaine users had increased by 173%. Naturally evidence of more widespread use gives rise to questions concerning effects on public as well as individual health. An experiment was designed to evaluate the behavioural effects and abuse potential of cocaine, as compared with those of d-amphetamine. Volunteer subjects aged 21-35 yr (sex unspecified) were given doses of 10 mg i.v. d-amphetamine and 4 to 32 mg i.v. cocaine over a period of two weeks. Each subject had a history of illicit drug abuse, and was considered fit psychologically and physiologically. Clinical abnormalities did not show up in any EEG recordings after either drug. Figures are given illustrating the effects of both drugs on heart rate, blood pressure, subjective rating and plasma levels. Ten milligrams of amphetamine produced about the same peak and duration of effect on blood pressure as 24 or 32 mg cocaine. Cocaine caused a higher peak of heart rate, but of shorter duration. A questionnaire administered to obtain information on such effects as euphoria and sedation showed that 10 mg amphetamine was similar in action to 16 mg cocaine. Subjects discriminated accurately between drug and placebo, but not between cocaine and amphetamine; for example, on nine out of 14 occasions amphetamine was mistaken for cocaine. Maximum high after cocaine injection occurred within three to five minutes and dissipated within 40 min. After inhalation, it occurred within 20 min and disappeared after an hour or so. In non-human species, cocaine has been seen to act as a potent reinforcer; monkeys prefer cocaine to saline, and the more the better (i.e., they will choose higher over lower doses). Anorexia and insomnia were reported by the subjects of one study after cocaine administration; and there was a single case of an anxiety attack after four injections of 16 mg cocaine within 35 min. The authors conclude that unlimited access to cocaine could lead to a higher incidence of toxic reactions, including possibly convulsions and death.

103 Fischman, M.W. and Schuster, C.R.
ACUTE TOLERANCE TO COCAINE IN HUMANS.
In: Harris, L.S. (ed.), Problems of Drug Dependence, 1980. Vol. 34. Rockville, MD: National Institute on Drug Abuse, 241-242, 1981.

E. - exp. pap. - human - adult - inhal. - i.v. - dose/resp. - inject. - acute - exp. admin. - intranasal - stim. - subj. change - cardiovasc. - heart rate - blood - tolerance

Eight normal adult volunteers participated in an experiment designed to determine whether or not i.v. injections of cocaine produce acute tolerance. The effects of drug administration were monitored both after placebo and after previous cocaine intake. It was found that drug effects on heart rate, subjective experience, stimulant scale scores and mood were smaller when subjects had inhaled 96 mg cocaine before the i.v. administration. Thus, acute tolerance is suggested. Long-term tolerance was not observed.

104 Fischman, M.W. and Schuster, C.R.
COCAINE SELF-ADMINISTRATION IN HUMANS.
Federation Proceedings 41(2): 241-246, 1982.

E. - exp. pap. - human - animal - primate - adult - exper. user - self-admin. - i.v. - inject. - dose/resp. - toxicity - reac. time - stim. - subj. change - euphoria - cardiovasc. - heart rate - blood press. - card. arrhyth. - EKG - pulse - blood - anorexia - dr. comp. amph.

Cocaine is known to be self-administered by animals and abused by many persons on the street. The authors arranged an experiment with an unspecified number of healthy, normal volunteers aged 21 to 35 yr, all experienced stimulant users. Cardiovascular effects of 10 mg i.v. administered *d*-amphetamine were compared with those of 4 to 32 mg i.v. cocaine. EKG recordings showed no abnormality for either drug. Cocaine caused a dose-related rise in heart rate and blood pressure in all subjects. Eight mg cocaine produced an effect on heart rate similar to an average self-injected street dose. The 24 to 32 mg doses were perceived as extremely high. Subjects succeeded in discriminating between even small amounts (4 mg) of cocaine and placebo. However, they had some difficulty in telling the difference between cocaine and amphetamine. Of a total of 14 d-amphetamine administrations, nine were identified as cocaine. Thus, the actions of cocaine appear to be similar to those of other stimulant drugs. In another experiment designed to assess the correlation between plasma levels and effects of cocaine, it was found that disappearance of drug from plasma paralleled the return of heart rate to normal. Maximum high occurred 15-20 min after inhalation. Generally, there was a good correspondence between subjective high, cardiovascular effects and plasma concentration. In another experiment, four human subjects chose between i.v. cocaine and saline, and could request a maximum of 10 injections during a one-hour session. For the most part, they chose cocaine over saline. In yet another experiment, four subjects taking up to 224 mg cocaine in one hour showed no cardiac arrhythmias, though they reported feeling stimulated, euphoric, and anorexic. In conclusion, cocaine acts as a positive reinforcer both in animals and humans, showing that animal studies can be relevant to human consumption of drugs.

105 Fischman, M.W. and Schuster, C.R.
COCAINE SELF-ADMINISTRATION IN HUMANS.
Psychopharmacology Bulletin 19(4): 772-773, 1983.

E. - exp. pap. - human - animal - self-admin. - i.v. - inject. - dose/resp. - subj. change - cardiovasc. - heart rate - blood press. - blood - saline

Knowing cocaine to be a potent reinforcer in animals, the authors set up an experiment to see whether this would also be true for humans. An unspecified number of subjects was allowed to choose between i.v. doses of cocaine and saline during ten two-hour sessions for two weeks. Doses ranged from 4 to 32 mg. Records were kept of drug choice, heart rate, blood pressure, subjective effects and plasma levels. The majority (percentage unspecified) preferred cocaine, even at the low doses which did not affect heart rate, blood pressure or measures of subjective effects. The preference for cocaine did not decline over the session. Therefore, cocaine appears to be a potent reinforcer for humans as well as animals.

106 Fischman, M.W., Schuster, C.R. and Rajfer, S.
A COMPARISON OF THE SUBJECTIVE AND CARDIOVASCULAR EFFECTS OF COCAINE AND PROCAINE IN HUMANS.
Pharmacology Biochemistry and Behavior 18(5): 711-716, 1983.

E. - exp. pap. - human - animal - primate - male - female - adult - user - in vivo - acute - exp. admin. - i.v. inject. - stim. - dose/resp. - therap. use -

anesth. - reac. time - CNS - subj. change - memory - cognit. - affect - euphoria - cardiovasc. - heart rate - EKG - USA - dr. comp. procaine - urinalysis - blood - blood press. - anxiety - depression - confusion - hunger - dependence

Four volunteers (three male, one female) aged 21 to 28 yr with histories of cocaine use participated in a study designed to compare the effects of cocaine and procaine. One i.v. injection of saline, cocaine or procaine was administered daily for ten days. The cocaine and procaine doses were 16, 32, and 48 mg. The cardiovascular effects of cocaine were as expected (i.e., heart rate increase within 15 min of drug intake), but procaine had no such effect. Subjects accurately identified saline and placebo, but unanimously mistook 16 and 32 mg procaine for placebo. At higher doses (48 and 96 mg), procaine was thought to be cocaine by three subjects. To date procaine has not become a popular drug of abuse in the US, but it is used as an adulterant for cocaine and as such may be responsible for some of the reinforcement presumed to be associated with cocaine.

107 Fishbain, D.A. and Wetli, C.V.
COCAINE INTOXICATION, DELIRIUM, AND DEATH IN A BODY PACKER.
Annals of Emergency Medicine 10(10): 531-532, 1981.

E. - case rep. - clin. pap. - human - male - adult - White - oral - toxicity - treatm. - o.d. - seizure - epilepsy - reac. time - coma - resp. depr. - vocaliz. - abnor. behav. - confusion - orientation - psychosis - tachycard. - blood press. - hypertens. - pulse - respir. - intest. - mydr. - hypertherm. - death - body temp. - autops. - USA - S. Am. - dr. tr. anticonvuls. - dr. tr. propan. - dr. tr. barb. - dr. tr. diaz.

An individual who attempts to smuggle cocaine by intracorporeal means is known as a "body packer." The drug is wrapped in plastic containers, and swallowed, to be retrieved later with the help of laxatives or enemas. Death may occur if the plastic container ruptures in the intestine. Usual presenting symptoms in such cases include hyperthermia, hypertension, tachycardia, mydriasis, seizures and respiratory arrest. The authors give a case report in which delirium is described for the first time as a presenting symptom in a body packer. A 31-year-old white man was taken to emergency after displaying polydipsia and agitation. At the hospital, he became violent and had to be restrained. He shouted obscenities and spat. After transfer to the psychiatric ward, physical examination was normal except for mydriasis. Three-and-a-half hours after admission, he died from respiratory arrest. Autopsy showed that the patient had failed to pass one cot of cocaine and thus had developed cocaine toxicity. However, since he lied during his medical examination and presented with apparent psychiatric symptoms his true condition was not known and the appropriate treatment was not given. In conclusion, patients presenting with delirium should be monitored carefully and possibly given toxicological screenings.

108 Fishbain, D.A.
COCAINE INTOXICATION, DELIRIUM, DEATH IN BODY PACKER [REPLY].
Annals of Emergency Medicine 11(7): 390, 1982.

E. - lett. ed. - human - male - toxicity - treatm. - o.d. - crim. behav. - card. arrhyth. - intest - death - dr. tr. haloperidol

The author replies to a letter by Bar-Or, D. and Wahby, L. (Ann. Emerg. Med. 11(7): 389-390, 1982) in which a diagnosis of cocaine poisoning was questioned. He lists three findings of the medical examiner: cot of cocaine in cecum, police description of victim as "body packer," and blood cocaine levels of .21 mg/l. (This latter finding was not mentioned in the original paper: Fishbain, D.A. and Wetli, C.V. Ann. Emerg. Med. 10(10): 531-532, 1981.) He suggests that the final cause of death in this case could have been cardiac arrhythmia.

109 Forno, J.J., Young, R.T. and Levitt, C.
COCAINE ABUSE - THE EVOLUTION FROM COCA LEAVES TO FREEBASE.
Journal of Drug Education 11(4): 311-315, 1981.

E. - gen. disc. - human - animal - user - inhal. - oral - i.v. - dose/resp. - inject. - intranasal - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - o.d. - CNS - reac. time - resp. depr. - convuls. - depression - stim. - memory - anxiety - paranoia - euphoria - suicide - sleep - mult. drug use - psychosis - cardiovasc. - heart rate - blood press. - card. arrest - respir. - asthma - anorexia - teeth - nose - mydr. - physical dep. - psych. dep. - withdrawal - body wt. - wt. loss - death - USA - S. Am. - coca leaf - hydrochloride - free-base - Coca-Cola - heroin - ethanol - dr. comp. amph. - cannabis - dr. tr. diaz. - dr. tr. propan. - dr. tr. barb. - morph.

In 16th century Peru, coca was chewed in connection with religious ceremonies and to stimulate memory. Today leaves are chewed by the Andean Indians who seem to suffer no harmful effects from 80-400 mg/day, apart from stained teeth. Sigmund Freud used cocaine and described its beneficial effects as curing indigestion, increasing strength, and treating alcoholism, asthma and morphinism. In the US, cocaine was used in the past in many tonics and beverages such as Coca-Cola. Since the 1960s, most abusers have inhaled the drug intranasally (snorting) or injected it i.v. The CNS stimulant effects resemble those of amphetamine: increased heart rate and blood pressure; higher respiratory rate (followed by decrease); greater alertness; mydriasis; convulsions; and death due to cardiorespiratory arrest (after high doses). Other recognized symptoms of abuse include anxiety, insomnia, anorexia, weight loss, hyperactivity, paranoia and euphoria. Physical dependence does not occur but a powerful psychological reinforcement can lead to frequent administrations. Freebase cocaine is the purified hydrochloride which produces a short, intense high with a rapid onset. Overdosing by this means is not unusual because high blood levels are achieved quickly and the respiratory control centre can be compromised. Psychosis is also more likely to result from free-basing than from snorting. Lethal dose has been reported at 1.2 g orally, but there are enormous variations and fatalities have occurred after doses of less than 100 mg. Toxicity can be treated with pressurized oxygen, i.v. diazepam, secobarbital, propanolol, lidocaine or tricyclic antidepressants.

110 Freedman, D.X.
AMPHETAMINE AND COCAINE ABUSE [REPLY].
Postgraduate Medicine 48(1): 57-59, 1970.

E. - lett. ed. - chronic - human - animal - rat - cat user - histology - CNS - brain - opiates - amph. - nicotine - tobacco - alcohol - heroin - LSD - morph.

The author replies to the letter by J.W. Smith (Postgrad. Med. 48(1): 57, 1970) in which a statement is questioned regarding the failure of chronic cocaine and amphetamine abuse to lead to physical disease. It is emphasized that the original statement included the word "probably," and therefore was not an absolute denial of the possibility of physical consequences from abuse of these drugs. Amphetamine and opiate addiction is discussed.

111 Freud, S.
UEBER COCA. [On Cocaine.] (Ger)
Zentralblatt für die Gesammte Therapie 11(7): 289-314, 1884.

G. - clin. pap. - human - cat - dog - acute - dose/resp. - oral - toxicity - therap. use - hist. of coc. - depression - stim. - euphoria - sleep - orientation -

pulse - respir. - asthma - dry mouth - appetite - urine - S. Am. - Europe - Erythrox. coca - alcohol - tea - coffee

The author discusses the history and origin of the plant Erythroxylon coca, noting the habit of South American natives of chewing the leaves. Therapeutically cocaine can be useful in inducing sleep, easing stomach cramps, and relaxing muscles. Lethal dose s.c. varies from species to species, but is thought to be about .02 g/kg in the cat. In order to study the effects of cocaine on a healthy individual, the author self-administered .05 g mixed in a solution of water. A few minutes afterwards, he suddenly felt extra cheerful with a sense of lightheartedness. His lips and gums became numb at first, then warm; when he drank cold water it felt warm on the lips but cold in the throat. Respiration slowed down and deepened, he grew tired and yawned, and soon true cocaine euphoria set in. His pulse slowed down at first, but then became more rapid. He had observed the same physical effects in others. Generally, toxic effects are short-lived. Mantegazza named other effects such as increased urine volume, dried conjunctivae and nasal passages, odorous urine and feces, and variable change in pulse. The euphoria experienced is like the normal happiness of a healthy man. The senses are not disturbed, as they are with alcohol. One feels confident and clever, but not intoxicated or nervous as with tea or coffee. This wonderful stimulation makes it possible to perform great physical labour without fatigue. One is indifferent to food, and cannot sleep until the effects begin to wear off. The author finds cocaine a fine remedy for hunger, sleepiness and fatigue. He observed a colleague who was able to work at full-strength for many hours under the influence of this drug, without food or rest. Other authors are cited to support this view. There is no depression or lingering intoxication even after a large dose. More examples are given of its possible therapeutic applications.

112 Freud, S.
BEITRAG ZUR KENNTNISS DER COCAWIRKUNG. [On the Effects of Coca.] (Ger)
Wiener Medizinische Wochenschrift 5 (Jan.): 130-133, 1885.

E. - exp. pap. - human - male - acute - anesth. - exp. admin. - self-admin. - dose/resp. - affect - reac. time - subj. change - euphoria - anxiety - musc. - hand

The use of cocaine as a local anesthetic in eye surgery is becoming well-known. In a previous paper, the author noted its ability to improve one's mood and give a sense of physical and mental well-being, though the subjective effects do vary among individuals. Although many experience euphoria, others have less pleasant reactions such as anxiety. The author designed an experiment which he tried on himself and others to test the effect of cocaine on physical strength. Hand pressure was measured on a dynamometer during physical exertion. Tables are given to illustrate the considerable increase in strength after cocaine consumption. These experiments were performed for several weeks, and the author began to reflect that the effect of cocaine was probably indirect, i.e., it did not affect the muscles themselves but caused the subject's mood to improve which in turn led to greater physical stamina. This interpretation is in keeping with the noted swift reaction of euphoria to cocaine.

113 Freud, S. .
BEMERKUNGEN ÜBER COCAINSUCHT UND COCAINFURCHT.
[Observations on Cocane Addiction and the Fear of Cocaine.] (Ger)
Wiener Medizinische Wochenschrift 28: 929-932, 1887.

G. - clin. pap. - gen. disc. - human - male - female - adult - acute - chronic - self-admin. - s.c. inject. - top. admin. - dose/resp. - therap. use - toxicity - anesth. - treatm. - musc. weak. - depression - pain - subj. change - euphoria - sleep halluc. - heart - pulse - blood - respir. - appetite - addiction - death - dr. comp. caff. - dr. comp. morph.

Because of recent publicity about the splendid uses of cocaine as a local anesthetic, there has been little discussion about its equally valuable potential in the treatment of nervous disorders. Cocaine can also be used as a remedy for morphine addiction, although there is always the danger that the patient will become addicted to cocaine. In high doses, such as one gram, cocaine is in fact more dangerous than morphine. This is why one author referred to cocaine as the third scourge of mankind (after alcohol and morphine). The toxic effects of cocaine were actually discovered at about the same time as its therapeutic potential. The alarm about its dangers may be exaggerated by morphine addicts who become addicted to cocaine as well; remember that such individuals have a predisposition to addiction in the first place. Non-addicts, including the author, are able to take cocaine over a long period of time without developing any dependence. Excessive doses will certainly give rise to adverse effects such as unstable pulse, respiratory difficulties, loss of appetite, insomnia, delirium and muscular weakness. Some of these effects are more likely to occur after topical administration through mucous membranes; others, after s.c. injection. Adverse effects from moderate doses can usually be attributed to an idiosyncratic reaction. Experts vary greatly in their estimates of toxic or lethal doses. Brief case reports are given to illustrate the successful use of cocaine in the treatment of spinal pain, indigestion and melancholy in women.

114 Gade, E.M.
COCAINE USERS: A REPRESENTATIVE CASE APPROACH.
Personnel and Guidance Journal 60(2): 125, 1981.

E. - bk. rev. - case rep. - human - male - adult - exper. user - Black - White - hist. of coc. - euphoria - crim. behav. - heart rate - aphrodisiac - homosexuality - nose - vision - wt. loss - USA - coca leaf - Coca-Cola

The author gives a favourable review of this book by Spotts, J.V. and Shontz, F.C. (New York: Free Press, 1980). The book includes nine case histories as well as a discussion of the history and effects of cocaine use. The case histories are said to be vivid and personalized, including men of such occupations as rock musician and salesman. Among their conclusions, Spotts and Shontz state that cocaine does not turn men into antisocial fiends, nor does it lead to homosexuality or mental deficiency. Social and legal counsellors may find the book useful.

115 Garcés, G.
EL INDIO ECUATORIANO Y LA COCA [The Ecuadorean Indian and Coca] (Spa.).
América Indígena 5(4): 287-293, 1945.

Sp. - gen. disc. - human - oral - depression - stim. - hunger - S. Am. - Colombia - Peru - Bolivia - Ecuador - Venezuela - coca leaf - ethanol

The author refutes a statement made by another author that the use of coca is common among Ecuadorean Indians. Coca chewing is practised in Bolivia, Peru and Colombia, but not in Ecuador. Indians there, on the contrary, seek relief from misery and suffering through the use of alcohol. This habit is harmful, like the coca habit, because it deceives the body into feeling strengthened for a short time but then leaves it weaker than before. It is curious that the Ecuadorean Indian does not chew coca since the plant was cultivated in that region during Colonial times, and the vice is widespread among other native South Americans who suffer from malnourishment.

116 Gardner, R.
PSYCHOTOMIMETIC EFFECTS OF CENTRAL STIMULANTS.
In: Symposium on Abuse of Central Stimulants, Swedish Committee on International Health Relations, Stockholm, Nov. 25-27, 1968.

E. - rev. - human - acute - chronic - treatm. - CNS - stim. - psychosis - paranoia - aud. halluc. - vis. halluc. - tact. halluc. - dr. comp. amph. - dr. tr. ethanol - dr. tr. barb. - LSD

The author makes a mere mention of cocaine in this paper which deals more thoroughly with LSD and the amphetamines. It is noted that at the time of writing the English literature on cocaine is scarce, most of the important work having been published in German and not translated. There are reports, however, of a paranoid psychosis with auditory, visual and tactile hallucinations associated with cocaine use. Also in the literature a distinction is made between the acute and chronic clinical picture. Barbiturates and alcohol can modify the effects of cocaine. Speculation has arisen as to whether or not the amphetamines and cocaine, similar in their effects, may be mediated by a "final common path."

117 Garland, O.H.
FATAL ACUTE POISONING BY COCAINE.
Lancet, pp. 1104-1105, November 2, 1895.

E - case rep. - clin. pap. - human - male - female - adoles. - adult - acute - oral - s.c. - inject. - dose/resp. - therap. admin. - top. admin. - toxicity - o.d. - epilepsy - reac. time - brain - vertigo - convuls. - suicide - heart - pallor - blood - anemia - spleen - lungs - stom. - liver - bladder - kidney - urine - skin - teeth - nose - mydr. - death - body temp. - rigor mortis - autops. - U.K. - USSR - hydrochloride

The author, a medical doctor, examined the body of a young woman (about 17 years old) who had swallowed two drachms of a 10% solution of cocaine hydrochlorate for the relief of toothache. She experiened vertigo and epileptiform convulsions and died within 40 min. Initial examination revealed cold extremities, pallor, mydriasis and clenched teeth. Post-mortem findings included a blood-stained right nostril; anemia; congested meninges; healthy heart; congested lungs; hyperemic liver, spleen and kidneys; and otherwise normal organs. The author comments on the relatively few recorded cases of cocaine fatalities. Lethal dose is impossible to estimate since as little as two-thirds of a grain has caused death and yet as much as 46 grains has been swallowed without fatality.

118 Gawin, F.H. and Kleber, H.D.
COCAINE ABUSE TREATMENT.
Archives of General Psychiatry 41(9): 903-909, 1984.

E. - exp. pap. - case rep. - human - male - female - adult - user - in vivo - acute - chronic - inhal. - i.v. inject. - toxicity - treatm. - side-effect - depression - stim. - subj. change - psychol. - psychiat. - euphoria - dysphoria - sleep - mult. drug use - irritability - liver - urinalysis - dependence - physical dep. - psych. dep. - withdrawal - craving - addiction - USA - free-base - dr. tr. antidepress. - dr. tr. desipramine - dr. tr. lithium

Despite increasing numbers of cases of cocaine abuse, there is little agreement among physicians concerning optimal treatment methods for this major public health problem. Since addiction to cocaine is usually interpreted as a psychological rather than physiological phenomenon, most treatments have consisted of behavioural modification. Pharmacological intervention has not been considered as a means of curtailing abuse. The authors discuss the possibility of treatment with desipramine hydrochloride and lithium carbonate, based on evidence that cocaine abuse does lead to neurochemical changes and that the dysphoria or craving experienced after cessation of use also has a neurochemical cause. Tricyclic antidepressants have proven successful in treating the effects of chronic amphetamine abuse, and therefore should be considered in the treatment of cocaine abuse (amphetamine and cocaine being similar stimulants). Sixteen chronic users were studied to determine their reactions to lithium carbonate, desipramine, and no medication. A table is given outlining the various treatments, subject characteristics, DSM-111 (psychiatric) diagnoses and states of depression. The results show that all patients undergoing desipramine medication decreased and ceased their cocaine abuse, regardless of their original clinical condition. Lithium carbonate, however, was effective only in cyclothymic patients (i.e., patients with a condition characterized by marked swings in mood). Three case reports are given indicating successful release from cocaine cravings in two males and one female, after treatment with desipramine (two cases) and lithium carbonate (one case). In view of the limitations of traditional treatment approaches, these examples of enduring abstinence achieved by pharmacological means are encouraging and should be explored further. Eighty per cent of the 16 subjects in this study stopped their cocaine use, and none of those taking medication dropped out of the study. This high success rate, indicative of extraordinary patient cooperation, may have been due to the pharmacologically lessened stress of cravings upon cessation of use. Psychotherapy may have been more effective also because of the patients' lowered stress level during abstinence. Thus the medications described are not regarded as direct cures for cocaine addiction, but as possible adjuncts to psychotherapy.

119 Gay, G.R., Sheppard, C.W., Inaba, D.S. and Newmeyer, J.A.
AN OLD GIRL; FLYIN' LOW, DYIN' SLOW, BLINDED BY SNOW: COCAINE IN PERSPECTIVE.
International Journal of the Addictions 8(6): 1027-1042, 1973.

This paper is very similar to others published by the same authors.

For annotations see: Citations 122 and 124

120 Gay, G.R., Sheppard, C.W., Inaba, D.S. and Newmeyer, J.A.
COCAINE IN PERSPECTIVE: "GIFT FROM THE SUN GOD" TO "THE RICH MAN'S DRUG."
Drug Forum 2(4): 409-430, 1973.

This paper is almost identical to another published by the same authors (Int. J. Addict 8(6): 1027-1042, 1973). The latter also was very similar to two other papers already summarized.

For annotations see: Citations 122 and 124

121 Gay, G.R., Inaba, D.S., Sheppard, C.W. and Newmeyer, J.A.
COCAINE: HISTORY, EPIDEMIOLOGY, HUMAN PHARMACOLOGY, AND TREATMENT. A PERSPECTIVE ON A NEW DEBUT FOR AN OLD GIRL.
Clinical Toxicology 8(2): 149-178, 1975.

Although organized in a different fashion, this paper contains very little that was not published in two other papers by the same authors.

For annotations see: Citations 122 and 124

122 Gay, G.R., Inaba, D.S., Rappolt, R.T., Gushue, G.F. and Perkner, J.J.
"AN' HO, HO, BABY, TAKE A WHIFF ON ME:" LA DAMA BLANCA COCAINE IN CURRENT PERSPECTIVE.
Anesthesia and Analgesia 55(4): 582-587, 1976.

E. - clin. pap. - human - animal - male - acute - chronic - inhal. - oral - dose/resp. - inject. - intranasal - anesth. - toxicity - therap. use - treatm.

- hist. of coc. - chem. - law - o.d. - price - CNS - hyperref. - reac. time - resp. depr. - vertigo - convuls. - depression - stim. - paranoia - euphoria - aggress. behav. - sleep - crim. behav. - mult. drug use - affect - confusion - schizophrenia - halluc. - heart rate - card. arrest - blood press. - respir. - impotence - aphrodisiac - liver - vomiting - urin. ret. - sweating - nose - tolerance - phys. dep. - hypertherm. - death - USA - U.K. - Europe - S. Am. - Coca-Cola - hydrochloride - dr. comp. amph. - dr. tr. propanolol - dr. tr. diaz. - dr. tr. barb. - ethanol - heroin

The authors give a summary of the history of cocaine and review the symptoms and treatment of acute and chronic overdose. Acknowledging it to be the "most exquisitely euphorogenic" illegal drug of all time, they recall its earlier uses as a stimulating tonic and highly effective local anesthetic. In the US, around 1860, it was praised as a remedy for alcoholism, tuberculosis, opiate addiction and heart failure. Dr. Sigmund Freud extolled the benefits of cocaine in a series of papers written from 1884 to 1887. In 1888, it was made part of the formula for Coca-Cola, but was removed by 1906 after the passing of the Food and Drug Act. Since 1914, cocaine has been a black-market drug with diminishing medical uses. It is both a local anesthetic and a CNS stimulant. Users label it the champagne of drugs, and pay from $500 to $1500 an ounce on the illicit market, whereas a medical institution pays about $20 an ounce. Inhalation can lead to septal perforation, infection of respiratory tract, and stuffy nose. As an aphrodisiac, it may be snorted, injected, or rubbed directly onto the genitalia. Even small doses will cause an increase in heart rate and blood pressure. Overdose may occasion mental depression, dry throat, vertigo, sweating, confusion and vomiting. In addition, the victim may suffer from respiratory depression (which can be fatal), hyperthermia, hyperreflexia, and convulsions. Doses as low as 30 mg have been known to cause cardiac arrest, although the standard fatal dose is considered to be 1.2g/70 kg body weight (taken orally). Neither physical dependence nor tolerance has been documented. Prolonged abuse can cause a condition like paranoid schizophrenia, often associated with violence. Suggestions for treatment include propanolol, barbiturates and diazepam, with advice to give the patient a sense of acceptance and reassurance.

123 Gay, G.R.
PSYCHEDELICS AND COCAINE.
In: Einstein, S. (ed.), Drugs in Relation to the Drug User. Critical Drug Issues. New York: Pergamon Press, 244-273, 1980.

This paper is very similar to an earlier one published elsewhere, except for a lengthy discussion of psychedelic drugs in general.

For key words and annotation see: Citation 122

124 Gay, G.R.
CLINICAL MANAGEMENT OF ACUTE AND CHRONIC COCAINE POISONING.
Annals of Emergency Medicine 11(10): 562-572, 1982.

E. - clin. pap. - gen. disc. - human - animal - heavy user - acute - chronic - inhal. - oral - inject. - dose/resp. - intranasal - anesth. - toxicity - therap. use - hist. of coc. - chem. - law - o.d. - price - CNS - hyperref. - tremor - seizure - reac. time - coma - resp. depr. - brain - vertigo - symp. NS - convuls. - behav. - depression - stim. - abnor. behav. - vocaliz. - psychomot. - cognit. - percep. - anxiety - paranoia - euphoria - dysphoria - aggress. behav. - irritability - delusions - confusion - psychosis - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - person. dis. - cardiovasc. - heart - heart rate - tachycard. - blood press. - hypertens. - card. arrhyth. - card. arrest - pallor - pulse - blood - allergy - respir. - rhinitis - pulm. ed. - hypoxia - sex behav. - epineph. - nausea - liver - vomiting - thirst - dry mouth - hunger - incontinence - urine - skin - sweating - teeth - nose - eye - mydr. - cell membr. - tolerance - physical dep. - psych. dep. - withdrawal - body wt. - wt. loss - hyertherm. - death - body temp. - phys. det. - USA - S. Am. - coca leaf - coc. mud - coc. flakes - coc. crystals - Erythrox. coca - free-base - hydrochloride - dr. comp. amph. - dr. tr. diaz. - dr. tr. propan.

In response to the dramatic increase in the number of cocaine abusers seeking help at the Haight-Ashbury Clinic, the author examines the cocaine reaction and the make-up of the "armed" cocaine personality. Cocaine has always aroused controversy because of its potency as an anesthetic and its toxicity as a CNS stimulant. Today its use in medical practice is very limited, but its popularity as a recreational drug among middle-class Americans has become considerable. In addition to injection and snorting, neither of which is a safe route of administration, abusers today are smoking the purified hydrochloride. This is called freebasing and accounts for a high percentage of admissions to treatment centres. In 1977, about 19 metric tons entered the US illegally; in 1980, this figure had risen to 51 metric tons. Cocaine is an alkaloid derived from the leaves of the South American shrub, Erythroxylum coca. Street cocaine is sold for $100-$160/g. The hydrochloride salt (up to 95% pure) is diluted with adulterants to such an extent that street samples from California were found to be from only 15% to 60% pure. The actions of cocaine vary greatly, depending on the site and route of administration, emotional and physiological state of the user, and general environment. It is the only known naturally occurring anesthetic. The high toxicity is due to the absorption rate of the drug often exceeding the rate of detoxification and excretion. Some typical manifestations of use include euphoria, talkativeness, restlessness and excitement. In cases of acute overdose, the victim may experience confusion, dry throat and dizziness. Death can result from respiratory depression if hypoxia is combined with inadequate cardiac output. Hyperthermia and hypertension may also be noticed. Abusers often suffer from rhinitis and upper respiratory infection. Lethal dose varies, but is thought to be about 1.4 g after ingestion for a 70-kg individual. However, it must be emphasized that cocaine has a low therapeutic ratio and a low margin of safety. Chronic users begin to experience dysphoria instead of euphoria; they lose weight and neglect personal hygiene. The appearance may become dirty, drawn, and dishevelled. Toxic psychosis from cocaine abuse, with irrationality and violence, is like that associated with amphetamine. Two tables outline the progressive stages of cocaine toxicity and a discussion of intervention measures follows.

125 Gay, G. and Merion, P.L.
MANAGEMENT OF COCAINE POISONING.
Annals of Emergency Medicine 12(10): 656-657, 1983.

E. - lett. ed. - clin. pap. - human - anesth. - toxicity - treatm. - o.d. - CNS - seizure - convuls. - card. arrhyth. - hypotens. - constip. - dry mouth - urine. retent. - urine - hypertherm. - USA - free-base - dr. tr. propan. - dr. tr. diaz. - dr. tr. chlorpromazine

In this letter to the editor, the author discusses his experience of managing several thousand cases of cocaine poisoning at the Haight-Ashbury Free Medical Clinics. The three most effective means of treatment are propanolol, diazepam, and acidification of urine to induce a greater rate of excretion. For hyperthermia, mechanical cooling with water, fans or ice is recommended. Because cocaine overdose can produce variable symptoms, emphasis is placed on attention to the needs of the individual in each different case.

126 Glatt, M.M.
REFLECTIONS ON HEROIN AND COCAINE ADDICTION.
Lancet ii: 171-172, 1965.

E. - clin. pap. - human - male - female - y. adult - i.v. - inject. - inhal. - treatm. - law - interper. rel. - crim. behav. - withdrawal - dependence - U.K. - dr. tr. methadone - dr. tr. diaz. - dr. int. heroin - ethanol - amph. - cannabis

The author discusses 30 heroin abusers most of whom were between 17 and 26 yr old. The majority had begun their drug habit with amphetamines and cannabis, and had also tried i.v. injections of heroin mixed with cocaine. Other commonalities among them included unhappy childhood, low education level, poor work record and criminal record. After withdrawal, methadone treatment was begun, followed by group therapy. Results of follow-up were not encouraging, apart from one male Canadian who had married, was working, and continued to visit the hospital regularly after discharge. The author recommends stricter regulation of addicts' supplies which are too easily obtained lawfully from doctors under the "British system."

127 Goddard, D., de Goddard, S.N. and Whitehead, P.C.
SOCIAL FACTORS ASSOCIATED WITH COCA USE IN THE ANDEAN REGION.
International Journal of the Addictions 4(4): 577-590, 1969.

E. - survey - human - male - female - adult - child - user - non-user - chronic - oral - therap. use - epilepsy - motiv. - lethargy - sex diff. - stom. - thirst - hunger - teeth - habit - S. Am. - Argentina - Bolivia - Ecuador - Peru - coca leaf - dr. comp. ethanol - dr. comp. tobac.

Habitual coca chewing is common in Argentina, Bolivia, Peru and Ecuador, but little research has been done on the sociological implications of this practice. The authors studied a population of male Bolivian rural workers, aged 25-49 yr, with no history of mental disorder, epilepsy, etc., and no history of alcoholism. Tables are given to indicate socioeconomic status; attitudes towards coca; drinking patterns; attitudes towards women chewers; kinship factors; relation to school performance of children; and social activity, for users and non-users. Chewing was found to be associated with work, both for men and women, and was not often regarded as a curative measure. The most frequent reason given for the habit was to induce strength and courage for work and to overcome laziness. It also helped to quench thirst and reduce feelings of hunger. Neither chewers nor non-chewers were regarded as deviant by either group, and coca chewing had little bearing on social relationships. Women used coca for medicinal purposes (e.g., toothache), and also to procure energy for tasks such as washing or ironing, but in general coca chewing was regarded as a male practice. The authors compare this habit to that of tobacco use and alcohol consumption in other societies, suggesting that it is quite normal in the appropriate context.

128 Goddard, D., de Goddard, S.N. and Whitehead, P.C.
THE EFFECT OF COCA ON HEALTH. A RESEARCH NOTE.
International Journal of the Addictions 5(1): 165-168, 1970.

E. - survey - human - male - y. adult - adult - chronic - oral - epilepsy - heart - stom. - appetite - habit - age eff. - phys. det. - S. Am. - ethanol

The authors examine the question of the relationship between health and coca chewing in an Andean population. Health of subjects was rated according to answers to a questionnaire on recent illness, hospitalization, appetite, etc. In general, controls gave evidence of better health than coca chewers. For example, 66% of control males were considered to be in good health whereas only 28% of users qualified for the same category. Tables are given to show the distribution of health ratings for users and controls. The results are not surprising since habitual coca chewing has been associated with adverse health effects for a long time.

129 Gonzales-Carrero, A. and Mancilla, A.
CONSIDERATIONS ABOUT THE PROBLEM OF COCA AND COCAINE IN VENEZUELA.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 206-212, 1980.

E. - book - gen. disc. - human - adolesc. - child - user - acute - chronic - inhal. - oral - intranasal - toxicity - hist. of coc. - law - CNS - hyperref. - resp. depr. - convuls. - depression - stim. - affect - anxiety - paranoia - euphoria - delusion - sleep - crim. behav. - confusion - halluc. - aud. halluc. - tact. halluc. - vis. halluc. - heart rate - tachycard. - blood press. - card. arrhyth. - pulse - respir. - dry mouth - anorexia - skin - musc. - sweating - eye - mydr. - hypertherm. - death - age - S. Am. - Venezuela - Erythrox. coca - tobac. - cannabis - barb. - amph. - LSD

Evidence for the destructive potential of pervasive drug abuse can be found in jails, hospitals and cemeteries. Legal restrictions are not always effective in curbing the trend of this social disease. In Venezuela, coca chewing is not a common practice but an increasing number of inhabitants do take the drug intranasally or by inhalation with tobacco. Acute toxicity is manifested by noticeable CNS stimulation, emotional lability, anxiety, confusion, euphoria, hallucinations, dry mouth, mydriasis, hyperreflexia, hyperthermia, tachycardia and accelerated pulse. High doses can cause convulsions and death due to respiratory arrest. Chronic toxicity can be recognized by hyperexcitability, sometimes called cocaine drunkenness; feelings of strength; itching of the skin, as though insects were crawling underneath it; hallucinations (visual, auditory or tactile); delirium; delusions of persecution; depression; insomnia; anorexia; increased heart rate; and angina pectoris. The most important means of prevention is education aimed at increasing accurate knowledge of all aspects of drug abuse, and forming responsible attitudes in people towards the way their behaviour affects themselves and others.

130 Goodwin, F.K., Post, R.M. and Kotin, J.
COCAINE: CLINICAL EFFECTS IN DEPRESSED PATIENTS.
Psychopharmacologia 26(Suppl.): 82, 1972.

E. - abst. - exp. pap. - human - exp. admin. - oral - i.v. - dose/resp. - therap. admin. - therap. use - EEG - brain - depression - abnor. behav. - psychiat. - anxiety - euphoria - sleep - heart rate - blood press. - pulse - lacrimation

An experiment was conducted to gauge the effectiveness of cocaine as an antidepressant. Cocaine was administered orally during 14 sessions at gradually increasing doses, reaching a maximum of 30 mg q.i.d. to 100 mg b.i.d. Seven patients were given 2-16 mg i.v. over one to three minutes. Oral cocaine did not affect vital signs but caused a decrease in REM sleep. Intravenous cocaine produced sleepiness, emotional outbursts and tearfulness as well as increased heart rate and blood pressure. One patient experienced euphoria. Two patients showed no response at all to the drug. One seriously depressed individual suffered from greater than usual anxiety. Thus, this experiment did not demonstrate a consistent therapeutic value of cocaine as an antidepressant.

131 Gould, L.C. and Kleber, H.D.
CHANGING PATTERNS OF MULTIPLE DRUG USE AMONG APPLICANTS TO A MULTIMODALITY DRUG TREATMENT PROGRAM.
Archives of General Psychiatry 31(3): 408-413, 1974.

E. - survey - gen. disc. - human - user - treatm. - mult. drug use - USA - heroin - methadone - amph. - barb. - cannabis

The authors analyze trends in polydrug abuse in a sample of 1665 patients in a treatment unit in Connecticut from 1970 to 1973. Answers to a questionnaire revealed that multiple drug use is not a new phenomenon by any means, nor does it appear to be increasing. The use of heroin and cocaine has declined. Eighty-one per cent of the cohorts reported having begun to use cocaine prior to 1964, whereas only 32% had begun to use it from 1970-1972. (However, the number of only-cocaine users increased from one before 1964, to eight from 1970-1972). Cohorts for all time periods tended to use marihuana before other drugs and cocaine after other drugs. The last cohort (1970-1972 began using illegal drugs) described their pattern in descending order of use as: marihuana, heroin, barbiturates, amphetamines, psychedelics and cocaine. In summary, heroin and cocaine use appears to be declining. If these "sinister" drugs are no longer perceived as a major social problem, support for treatment facilities may be difficult to obtain.

132 Granier-Doyeux, M.
SOME SOCIOLOGICAL ASPECTS OF THE PROBLEM OF COCAISM.
Bulletin on Narcotics 14(4): 1-16, 1962.

E. - gen. disc. - human - adult - child - White - oral - toxicity - law - depression - stim. - cognit. - concent. - lethargy - hunger - anorexia - habit - death - S. Am. - Brazil - Peru - Bolivia - Argentina - Chile - Colombia - coca leaf

The author makes a case against the coca habit which he considers harmful to health and to social and economic progress. Since it is practiced by millions of South Americans, there is cause for alarm over the toxicity of the alkaloid, cocaine, which is released during mastication. The coca leaf is no substitute for food and its ability to deaden feelings of hunger leads to aggravation of the already-existing malnutrition in Peru, Bolivia and Colombia. The coca habit causes mental and physical alterations in the individual which prevent him from attaining a higher social and economic level. There is no proof that it helps to cope with the stress of high-altitude living. This injurious practice should be eradicated through legislation imposing severe punishment of offenders. At the same time, efforts should be made to improve the physical and moral health of the affected populations. The coca chewer is lazy, cannot concentrate, will not assume responsibility, is prone to accidents, and has a bad influence on his children who are likely to take up the habit as well.

133 Gray, G.H.
COCA IN THE OPIUM HABIT.
Therapeutic Gazette 2(6): 231-232, 1881.

E. - clin. pap. - human male - female - adult - child - oral - dose/resp. - therap. admin. - therap. use - treatm. - tremor - depression - stim. - suicide - sleep - affect - interper. rel. - heart - arrhyth. - anemia - spleen - g.i. - intest. - liver - appetite - tongue - foot - eye - lacrimation - habit - withdrawal - body wt. - wt. gain - emaciation - USA - *Erythrox. coca* - morph. - opium - ethanol - strych.

A physician describes two cases in which *Erythroxylon coca* was used successfully in the treatment of opium addiction. The first case, a 25-year-old man, had been addicted to morphine for five years and was gloomy and suicidal with no hope of overcoming his "slavery." The author prescribed one pound fluid extract coca, six teaspoonfuls to be taken daily. The patient initially experienced chills, insomnia and tremors, but recovered within a month, able to give up both the morphine and the cocaine. Having gained weight and resumed a normal sleep pattern, he became "the happiest man in the state." The second case, a 34-year-old woman, had developed the habit of taking 1 1/2 oz laudanum two or three times daily. She suffered from emaciation, depression and resentment of her "bondage." Her liver and spleen were hypertrophied. The author directed her to take four to six drachms coca three times daily, with the result that she at first was unable to sleep and felt chilly, but eventually recovered, gained weight, cheered up and abandoned both the laundanum and the coca habit. The size of her liver and spleen had decreased. A third unsuccessful case is briefly mentioned in which a woman refused the coca treatment because of the insomnia it caused.

134 Grinspoon, L. and Bakalar, J.B.
COCAINE. A SOCIAL HISTORY.
Psychology Today 10(10): 36-39 and 77-78, 1977.

E. - rev. - human - male - female - adult - user - Black - acute - self-admin. - inhal. - oral - inject. - anesth. - therap. use - hist. of coc. - law - price - stim. - euphoria - crim. behav. - thirst - hunger - USA - S. Am. - Bolivia - Peru - Europe - U.K. - *Erythrox. coca* - coca leaf - Coca-Cola - amph. - caffeine - heroin - ethanol - cannabis - tobac. - aspirin

Cocaine is described as the most prized pleasure drug in America. Despite its rising popularity in the US and its long history of use in South America and Europe, public officials remain ignorant about it. In the 19th century it was recommended for toothache, digestive disorders and neurasthenia, as well as a means of achieving "strength and beauty forever." Sigmund Freud stated that the effects on self-administration included exhilaration and lasting euphoria, increase in self-control, and the overcoming of shyness in social situations. Coca-Cola, originated in 1886, contained cocaine for several years and was advertised as a general stimulant and cure for headaches. The oral route of administration does not produce as powerful or as immediate effects as the more usual routes of sniffing, smoking or injection. By 1931, in the US, every state imposed severe penalities for the non-medical use of this drug. The price rose sharply once it became legally restricted. Today the cocaine consumed recreationally by American street users is grown in South America and refined in clandestine laboratories. Adulteration is very common; often the buyer has no idea how much cocaine he is actually receiving. It is estimated that in New York City cocaine now costs about ten times as much as heroin. A National Institute on Drug Abuse survey showed that about 2.6 million men between 20 and 30 years old had tried it at least once. In rock songs and popular movies the drug has been given a glamorous image. The authors argue that the legal classification of cocaine as a narcotic is irrational, and that the government's repressive policy may be creating more problems than it is solving.

135 Grinspoon, L. and Bakalar, J.B.
A KICK FROM COCAINE.
Psychology Today 10(10): 41-42 and 78, 1977.

E. - gen. disc. - human - user - acute - chronic - inhal. - oral - inject. - anesth. - toxicity - law - tremor - reac. time - coma - vertigo - convuls. - depression - stim. - psychomot. - cognit. - anxiety - paranoia - euphoria - aggress. behav. - lethargy - sleep - crim. behav. - irritability - delusions - body percep. - confusion - psychosis - disinhib. - heart rate - blood press. - hypertens. - bl. vess. - blood - respir. - sex behav. - aphrodisiac - hyperglyc. - nausea - dry throat - musc. - sweating - nose - mydr. - tolerance - habit - withdrawal - sensitization - body wt. - wt. loss - death - body temp. - dr. comp. amph. - dr. comp. ethanol - dr. comp. heroin

The authors lament the appalling ignorance of the medical and scientific community about cocaine. There is very little documentation of the effects of recreational use. However, it is known that snorting can lead to such adverse effects as irritability, restlessness, paranoia, confusion, weight loss, insomnia, and injury to the nasal mucous membranes. Users describe the effects of amphetamines as longer-lasting, not as subtle, and more physical than those of cocaine. The desirable actions of cocaine include production of euphoria, exhilaration, great confidence and a sense of supreme well-being. Emotions such as fear and anxiety may accompany the euphoria, depending on the user's personality. Intravenous administration permits the drug to enter directly into the blood-stream, thus achieving more immediate and rapid effects. Large doses may cause delusions of grandeur, paranoia, and attentiveness to repetitious, meaningless tasks (also true for amphetamines). Cocaine can improve reaction time, speed, and wakefulness in the performance of intellectual tasks. General physiological effects are increased heart rate, respiration and body temperature; sweating; mydriasis; better muscle tone; higher blood-sugar level; constriction of blood vessels; and dry throat. Excessive doses may produce a syndrome of headache, weak pulse, hyperventilation, vertigo, nausea, tremors, convulsions, coma and death. Cocaine use is not definitely related to improved sexual performance, nor to the commission of crime. No tolerance has been observed, and in fact sensitization to the drug with continual use has been suggested. There is no clearly defined withdrawal syndrome, although the user may experience lassitude, irritability and depression when his body is required to recover from over-stimulation.

136 Grinspoon, L. and Bakalar, J.B.
COCAINE.
In: DuPont, R.L., Goldstein, A. and O'Donnell, J. (eds.), Handbook on Drug Abuse. Washington, D.C.: National Institute on Drug Abuse, 241-247, 1979.

This paper is very similar to another published by the same authors.

For annotation see: Citation 137

137 Grinspoon, L. and Bakalar, J.B
ADVERSE EFFECTS OF COCAINE: SELECTED ISSUES.
In: Millman, R.B., Cushman, P., Jr. and Lowinson, J.H. (eds.), Research Developments in Drug and Alcohol Use. Annals of the New York Academy of Sciences, Vol. 362. New York: New York Academy of Sciences, 125-131, 1981.

E. - rev. - human - animal - primate - dog - rat - mouse - pigeon - user - heavy user - acute - chronic - exp. admin. - inhal. - oral - i.v. - dose/resp. - inject. - intranasal - toxicity - treatm. - o.d. - price - CNS - resp. depr. - brain - convuls. - depression - stim. - concent. - anxiety - paranoia - euphoria - aggress.

behav. - suicide - homicide - lethargy - sleep - crim. behav. - mult. drug use - irritability - delusions - psychosis - halluc. - tact. halluc. - heart rate - blood press. - hypertens. - card. arrest - allergy - respir. - nose - mydr. - lacrimation - tolerance - dependence - physical dep. - psych. dep. - withdrawal - craving - sensitization - death - body temp. - free-base - hydrochloride - dr. comp. amph. - dr. tr. diaz. - dr. tr. propan. - dr. tr. barb. - caffeine - tobac. - ethanol

The authors review studies on cocaine for the past five years. In most cases, these studies do not contain surprising results, but are perhaps more reliable than previous works which were often biased and sensational. The CNS stimulant effects of cocaine are well-documented: euphoria, increased heart rate and blood pressure, heightened confidence, mydriasis, and rise in body temperature and metabolic rate. Studies are mentioned in which these effects are both confirmed and compared to those produced by amphetamine. The average street dose is estimated at 20-50 mg intranasally. Cocaine was not consistent in its effects on the mood of depressed patients. Adverse reactions of a serious nature are not common among recreational users, according to published data. However, some authorities believe that these data are misleading and tend to underestimate the severity of problems faced by street users. After the high, it is usual for irritability and lassitude to ensue along with cravings for more drug. An acute anxiety reaction has been noted, characterized by high blood pressure, racing heart, paranoia, and less frequently, tactile hallucinations, delusions, and psychosis. With high doses, death may result from depression of the medullary centres, leading to cardiac or respiratory arrest. Allergic reactions have not been documented. Oxygen and barbiturates are the recommended treatment for acute overdose. Aggressive and criminal behaviour has not been shown to be associated with cocaine abuse to the same extent that it has been shown to be associated with alcohol, barbiturate and amphetamine abuse. Chronic use of large amounts may disrupt eating and sleeping habits, produce irritability and inability to concentrate, and create psychological dependence. There is no physical dependence, but a mild withdrawal consisting of anxiety and depression can occur. Intravenous injection is more likely to cause most harmful effects, except those involving damage to the nose. Smoking cocaine base presents dangers of dependency and overdose as well. In conclusion, the authors consider that at present levels of use cocaine does not lead to serious medical or social problems.

138 Grinspoon, L. and Bakalar, J.B.
COCA AND COCAINE AS MEDICINES: AN HISTORICAL REVIEW.
Journal of Ethnopharmacology 3(2 & 3): 149-159, 1981.

E. - rev. - human - animal - self-admin. - s.c. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - CNS - neurol. - depression - stim. - paranoia - sleep - schizophrenia - affect - psychosis - heart - blood press. - pulse - respir. - asthma - aphrodisiac - sex behav. - stom. - g.i. - nausea - diarrh. - thirst - hunger - ear - nose - eye - habit - body temp. - USA - Canada - Europe - S. Am. - Peru - Bolivia - Coca-Cola - coca leaf - amph. - morph. - cannabis

Although this paper deals primarily with the therapeutic uses of cocaine, the authors point out that: "In recreational drug use there is often an element of self-medication, since the line between the pleasurable and the medicinal is not always easy to draw." Today cocaine is not used medically to any great extent, except as a topical anesthetic in eye, ear, nose and throat surgery. A 16th century chronicler wrote that coca relieves hunger and fatigue, strengthens the weary, and banishes sadness. In South America today, the leaves are commonly chewed for all of these purposes, as well as in treatment of toothache, ulcers, asthma, etc. Its medicinal uses were not accepted in Europe until 1860, when the alkaloid was isolated. The distinction between therapeutic and recreational use was not always clear. Sigmund Freud believed cocaine could be used to cure stomach disorders, diseases of the vocal chords and sexual indifference. Coca-Cola, first concocted in 1886, contained coca extract and was sold as a "wonder drug" until 1906 when the coca was replaced with caffeine. Cocaine use began to be perceived as a debilitating habit by doctors who were experiencing the fine line between its health-giving and pleasure-giving properties. It was denounced as the "third scourge of mankind" by Erlenmeyer, and eventually Freud changed his mind and recognized the dangers of the drug. The authors speculate that the recent rise in recreational use of cocaine in the US may lead to a revived interest in its medical applications.

139 Haddad, L.M.
1978: COCAINE IN PERSPECTIVE.
Journal of the American College of Emergency Physicians 8(9): 374-376, 1979.

E. - clin. pap. - gen. disc. - human - user - acute - chronic - inhal. - oral - i.v. - inject. - top. admin. - intranasal - anesth. - toxicity - therap. use - treatm. - hist. of coc. - chem. - law - price - CNS - neurol. -

epilepsy - convuls. - depression - stim. - paranoia - euphoria - suicide - homicide - crim. behav. - psychosis - halluc. - tact. halluc. - heart rate - blood press. - card. arrhyth. - respir. - asthma - sexual behav. - aphrodisiac - stom. - liver - vomiting - urine - skin - nose - physical dep. - psych. dep. - sensitization - death - body temp. - USA - S. Am. - Europe - Erythrox. coca - Coca-Cola - dr. comp. amph. - dr. comp. heroin - opium - morph. - caffeine - dr. tr. propan.

In the US, cocaine is now the recreational drug of choice, popular among the social elite. It is very dangerous nevertheless, and has been lethal by the intranasal route. The initial euphoria which it produces can give way to profound depression and psychological addiction after repeated use. Both suicides and homicides have been known to be associated with the abuse of this drug. As long ago as the sixth century, Peruvian Indians chewed leaves from the plant Erythroxylon coca as a religious rite. The alkaloid was isolated in 1860 in Europe, and in 1884 Sigmund Freud wrote that cocaine could be used as a stimulant; as a remedy for indigestion; in cachexia; to cure alcohol and morphine addiction; for asthma; as an aphrodisiac; and as a local anesthetic. In 1886, Coca-Cola was put on the market, containing both cocaine and caffeine, and became a popular elixir. A CNS stimulant, cocaine typically augments heart rate, blood pressure, and body temperature. Its clinical use in medicine is now limited to that as a topical anesthetic, especially in nasal surgery. Street cocaine costs $50 - $100/g and is usually adulterated. Frequent effects after both i.v. and intranasal injection are: euphoria, stimulation, freedom from fatigue, talkativeness, sexual arousal, heightened mental powers, alertness, and a desire to socialize. Users sometimes get "cocaine bugs" - a sensation of organisms crawling beneath the skin. A paranoid psychosis may occur. Reverse tolerance in which a greater reaction is experienced to the same dose after repeated use has been suggested. Hyperthermia and cardiac arrhythmias should be looked for in possible cases of cocaine intoxication.

140 Haddad, L.M.
COCAINE.
In: Haddad, L.M. and Winchester, J.F. (eds.), Clinical Management of Poisoning and Drug Overdose. Philadelphia, PA: W.B. Saunders, 443-447, 1983.

E. - rev. - human - user - acute - chronic - inhal. - oral - i.v. inject. - top. admin. - intranasal - dose/resp. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - o.d. - price - CNS - seizure - stim. - percep. - vis. percep. - tact. percep. -

paranoia - euphoria - aggress. behav. - suicide - homicide - motiv. - sleep - crim. behav. - psychosis - halluc. - heart rate - hypertens. - blood press. - card. arrhyth. - respir. - asthma - sex. behav. - vomiting - nose - mydr. - reverse tolerance - physical dep. - psych. dep. - addiction - hypertherm. - death - USA - coca leaf - Erythrox. coca - Coca-Cola - free-base

Today cocaine is not only a popular drug of abuse in the USA; it is also a status symbol among the wealthy and powerful and produces enormous illicit profits. Recreational use can be lethal, as can the criminal interactions involved in dealing. An alkaloid of the plant Erythroxylon coca grown in South America, cocaine was isolated in 1860 and used therapeutically shortly thereafter for the relief of fatigue and depression. Sigmund Freud publicized its uses in treating various ailments such as morphine addiction and asthma, and other prominent historical figures have also been associated with the drug. Since 1914, however, cocaine has been listed as a dangerous drug in the USA and its use is illegal. It can be taken i.v., orally, topically, and intranasally, the i.v. route delivering the highest blood levels within minutes. Its popularity stems from its ability to stimulate the CNS, causing increases in heart rate, blood pressure, and body temperature. Estimates of lethal dose vary greatly: 1200 mg, orally; and as little as 20 mg, parenterally. Today it retains therapeutic applications as an excellent local anesthetic and vasoconstrictor, especially in nasal surgery. In 1976, fifteen deaths were reported as the result of medical use of cocaine; six of these deaths followed administration of 200 mg or less. About 10 million Americans are thought to use cocaine regularly, in doses ranging from 0-200 mg. At $100/g, the drug is often inhaled through a dollar bill, though some prefer the more dangerous method of smoking free-base. Free-base is a purified form of street cocaine achieved by a relatively simple chemical process. Well-documented effects of occasional use include euphoria, energy, talkativeness, sexual arousal and increased sociability and mental alertness. Intensive use is more likely to result in negative consequences such as visual and tactile perceptual alterations and paranoid psychosis. The greatest risk is thought by some to be the psychological addiction attendant upon frequent use. Reverse tolerance has been reported (i.e., greater response to same dose administered repeatedly). Clinically a cocaine abuser is likely to present with dilated pupils, rapid respiration, and possibly vomiting and hallucinations. Seizures and cardiac arrhythmias may precede admission to emergency, as well as hypertension or hyperthermia. A perforated nasal septum is also indicative of cocaine abuse. Once the physical symptoms of overdose have been successfully managed, supportive care and psychiatric follow-up are advised.

141 Hamner, J.E., III and Villegas, O.L.
THE EFFECT OF COCA LEAF CHEWING ON THE BUCCAL MUCOSA OF AYMARA AND QUECHUA INDIANS IN BOLIVIA.
Oral Surgery, Oral Medicine, Oral Pathology 28: 287-295, 1969.

E. - clin. pap. - human - animal - rodent - mouse - rat - hamster - dog - male - female - adult - user - Black - White - acute - chronic - self-admin. - oral - therap. use - hist. of coc. - side-effect - CNS - musc. weak. - stim. - vocaliz. - percep. - euphoria - thyroid - delusions - psychosis - heart rate - blood press. - pallor - respir. - cancer - sex diff. - g.i. - liver - thirst - hunger - skin - musc. - tongue - habit - USA - S. Am. - Colombia - Peru - Bolivia - Ecuador - Australia - India - Africa - Malaysia - Erythrox. coca - coca leaf

The delicate tea-like leaves of the South American shrub, Erythroxylon coca, yield cocaine which has world-wide medical use. The habit of chewing coca is ancient; it played a large role in the culture of the Incan Empire among members of the aristocratic class. By the sixth century, it was used by the Indians of Peru for its euphoric effects and as a remedy for fatigue and poor nourishment. In 1950, there were an estimated 15 million South American addicts whose daily intake ranges from 10 to 100 g. An addict chews the coca bolus vigorously two or three times a day. Saliva helps to extract the alkaloid from the leaves. Prolonged ingestion produces negative symptoms such as sallow complexion, muscular weakness, apathy, introversion, incoherent speech, and dullness. Acute effects include rapid respiration and heart rate, increase in blood pressure, and CNS stimulation. Muscular strength is temporarily augmented in 50% of habitual chewers. If normal doses are exceeded, the addict may suffer from altered perception, delusions, pseudohallucinations and insanity. Chewers are also known to have insufficient vitamins, visual problems, enlarged thyroid, hepatomegaly, mental impairment, gastritis and inflamed tongue. A study was conducted to determine whether or not the presence of coca leaf and lime in the mouth for long periods could be carcinogenic. Forty-six biopsy specimens from Bolivian Indians showed no sign of buccal carcinoma.

142 Hanna, J.M.
FURTHER STUDIES ON THE EFFECTS OF COCA CHEWING ON EXERCISE.
Human Biology 43(2): 200-209, 1971.

E. - exp. pap. - human - adult - naive subj. - user - acute - exp. admin. - oral - CNS - reac. time - stim. - percep. - cardiovasc. - heart rate - blood press. - pulse - respir. - O_2 uptake - epineph. - age - hunger - skin - musc. - body wt. - habit - body temp. - S. Am. - coca leaf - dr. comp. caffeine

Coca leaves are chewed by Andean Indians as a remedy for hunger, fatigue and cold. It is thought that these beneficial effects are due to the presence of the alkaloid, cocaine, which is known to increase metabolism, respiration, pulse, and blood pressure. An experiment was set up to discover the effects of coca leaf mastication on heart and lung function during work performance. Twelve subjects (5 chewers, 7 non-chewers) exercised on the bicycle ergometer for ten minutes. Each person was tested twice, one day chewing coca and the other, not. The chewing had no effect on oxygen intake, ventilation or blood pressure, but during submaximal work caused a slightly elevated heart rate. At maximal work levels, chewers showed no peculiarities except a tendency towards slightly longer endurance. Thus, it would appear that coca chewing does not really elevate work capacity, but possibly causes the subject to perceive less effort or fatigue.

143 Hanson, A.
DRUGS OF ADDICTION. MICRO-METHODS FOR THEIR IDENTIFICATION.
National Institute of Technical Police, Stockholm, Sweden, p. 10-23, 1946.

E. - gen. disc. - human - frog - inhal. - inject. - intranasal - therap. use - hist. of coc. - chem. - law - price - CNS - stim. - euphoria - crim. behav. - irritability - mydr. - free-base - hydrochloride

The author expresses concern over the illicit traffic of "disaster-spreading poisons" such as cocaine, opium, and benzedrine. It is recalled that cocaine was first introduced into medicine in 1884, and subsequently became a popular recreational drug because of its stimulating and exhilarating effects. The two most common routes of administration are hypodermic injection and sniffing up the nostrils. At the time of writing it is not considered predominant on the black market mainly because of the difficulty in finding a cheap adulterant which is not easily spotted. Cocaine hydrochloride appears as colourless crystals or white powder. Microanalytic methods of detection are discussed. One physiological test known to be effective is done on small frogs which are extremely sensitive to cocaine. Dilated and rigid pupils, widening of the slit between the eyelids, and irritability of the nervous system indicate its presence.

144 Hartmann, H.
COCAINISMUS UND HOMOSEXUALITÄT. [Cocaine Addiction and Homosexuality]. (Ger).
Zeitschrift für Neurologie 95: 79-94, 1925.

G. - case rep. - gen. disc. - human - male - female - child - user - adult - acute - chronic - inhal. - oral - toxicity - law - paranoia - prog. drug use - halluc. - sex - sex. diff. - sex. behav. - testes - sperm - impotence - aphrodisiac - homosexual - dependence - age - morph. - hash. - opium - alcohol

Cocaine has the effect of an aphrodisiac on users at first, but once it is consumed chronically there follows a reaction of impotence and sperm reduction in men and frigidity and amenorrhea in women. This pattern also holds for morphine, opium, hashish and alcohol. Two French researchers have spoken of a "perversion of genital sense" under the influence of cocaine, again referring to chronic use. Cocaine can arouse sexual feelings in children and old women, and can cause some individuals to become homosexual. However, this does not mean that all cocaine users are homosexuals. Other perversions associated with cocaine are excessive masturbation, seduction of children, masochism and lesbianism. The author had occasion to observe 28 cocaine users who voluntarily sought help at his clinic, after getting into legal difficulties because of their drug habit. He obtained a sexual history from 20 of them (12 women and 8 men). Eleven (7 women and 4 men) were admitted homosexuals, and one of the remaining nine was considered by his father to be homosexual. The women exhibited sadistic tendencies and one man derived pleasure from observing homosexual interaction between women. Two women and one man reported no influence of cocaine on their sexual lives. Case reports are given of the 11 self-declared homosexual cocaine abusers. The majority of males were between 20 and 25 years old. Many reported hallucinations, paranoia and loss of will-power. The author enters into a lengthy discussion of the causes of homosexuality and the relationship between it and cocaine use. In conclusion, there will often be homosexual tendencies in individuals who are prone to cocaine dependence, and, similarly, there will often be a tendency to cocaine dependence in homosexuals.

145 Helfrich, A.A., Crowley, T.J., Atkinson, C.A. and Post, R.D.
A CLINICAL PROFILE OF 136 COCAINE ABUSERS.

In: Harris, L.S. (ed.), Problems of Drug Dependence, 1982. Vol. 43. Rockville, MD: National Institute on Drug Abuse, 343-350, 1982.

E. - clin. pap. - human - male - female - user - chronic - inhal. - dose/resp. - inject. - intranasal - treatm. - epidem. - behav. - abnor. behav. - psychol. - affect - habit - compulsion - age - USA - free-base - respir. - liver - nose - resp. depr. - wt. loss - sleep - vertigo - nausea - tremor - halluc. - delusion - suicide - anxiety - irritability - law - psychosis - ethanol - cannabis - amph. - opiates

Between 1975 and 1980, according to a NIDA survey, there was an increase of 500% in the number of persons seeking treatment for cocaine abuse. The authors question the assumptions that: (a) the effects of cocaine are benign to recreational users, and (b) route of administration is the most important determinant of severity of effects. One hundred and thirty-six patients over 18 yr of age (30 female, 106 male) sought treatment for negative effects of cocaine abuse; 57% were sniffers. The decision to get help was frequently based on the social and psychological results of cocaine abuse rather than on physical effects. Route of administration bore no relation to type of symptoms requiring treatment, psychopathology scores based on the MMPI scale, or dose. Generally speaking, habitual users had a higher than average number of problems of an interpersonal, financial, physical, and vocational nature. Increasing doses could be correlated with a greater likelihood of major physical symptoms. However, some of the consequences were indirect and insidious, such as the compulsive cycle of obtaining, using, and recuperating from cocaine abuse. This cycle entailed risks and losses (spouse, job, money), which often led to mental turmoil and the desire to obtain professional help. The authors emphasize the importance of these less obvious effects of the cocaine habit in evaluating its harmfulness.

146 Henderson, P.R.
COCA IN THE OPIUM HABIT.
Therapeutic Gazette 2(2): 79, 1881.

E. - case rep. - human - male - self-admin. - oral - dose/resp. - therap. admin. - therap. use - react. time - depression - lethargy - pallor - stom. - habit - phys. det. - opium

A doctor reports on a patient who had taken large doses of laudanum for several years to cure his stomach disease. He was a depressed, sallow, lifeless individual and suffered intensely when unable to obtain the opium. Directed to replace the opium with drachm doses of coca, he did so and rapidly recovered mental and physical health.

147 Hewer, C.L.
COCAINE AND COCA.
Anaesthesia 31(2): 294, 1976.

E. - clin. pap. - gen. disc. - human - oral - therap. admin. - top. admin. - anesth. - toxicity - therap. use - hist. of coc. - side-effect - convuls. - card. arrest - nose - dependence - S. Am. - coca leaf - lignocaine

The author expresses a high opinion of cocaine as an anesthetic, suggesting that some doctors are overly fearful of its toxic and addictive potential. He has not witnessed side-effects in his own patients after oral intubation or nasal spraying, but he did once witness violent convulsions and cardiac arrest in another doctor's patient after spraying of the larynx with lignocaine. The uniqueness of cocaine lies in its dual properties of being a naturally occurring anesthetic and a potent vasconstrictor. A brief history is given including details of the use of cocaine in Peru and by members of the Inca civilization who regarded it as sacred. The author concludes ... "if one must be addicted, one could do worse than chew coca leaves."

148 Higier, H.
BEITRAG ZUR KLINIK DER PSYCHISCHEN STORUNGEN BEI CHRONISCHEM KOKAINISMUS. [Psychological Disturbance due to Chronic Cocaine Use]. (Ger).
Münchener Medizinische Wochenschrift 7(10): 503-504, 1911.

G. - case rep. - psychol. - human - male - adult - user - dose/resp. - chronic - s.c. inject. - anesth. - toxicity - CNS - tremor - reac. time - vocaliz. - sleep - thought disorder - psychosis - halluc. - neurosis - dr. tr. morph. - dr. comp. alcohol

It has been some years since the discovery of cocaine and its local anesthetic properties. After only two occasions of use, whether external or internal, it can be difficult for someone to stop wanting cocaine, particularly in cases where there is some nervous or psychological predisposition to drug dependence. It would be rare for a healthy man who has no hereditary weaknesses to experience craving for cocaine. Like alcohol or morphine, cocaine causes damage to the nervous system if it is consumed chronically. A case report is given of a 26-year-old man with a nervous temperament who got into the habit of s.c. injections of cocaine, eventually reaching doses of up to 5 g/day.

Despite this, he continued to function well at work. Soon, however he experienced complete loss of appetite, insomnia and tremors. After a few months he became weak and pale; his thoughts became illogical and he had terrible nightmares and periods of uncontrollable talkativeness. A physician prescribed a large dose of morphine to calm him down. Similarities between cocaine psychosis and alcohol-induced psychosis are noted.

149 Hole, J.W.
COCA ERYTHROXYLON IN EXHAUSTION.
Therapeutic Gazette 1(10): 290-291, 1880.

E. - case rep. - human - female - adult - therap. admin. - treatm. - stim. - lethargy - hypoact. - appetite - wt. loss - emaciation - *Erythrox. coca*

The author gives a case report intended to illustrate the remarkable stimulant and tonic effects of *Erythroxylon coca*. A 40-yr-old woman had been bedridden for over a year because of exhaustion following an undiagnosed attack. She had no appetite or energy and was thought by her family to be on the point of death. The author was called in and prescribed a pill for sluggish bowels, massage, and coca. Almost immediately, the patient improved, regained her appetite, and got out of bed. Both patient and physician regarded the coca as the main reason for recovery.

150 Horberg, L.K. and Schnoll, S.H.
TREATMENT OF COCAINE ABUSE.
In: Masserman, J.H. (ed.), *Current Psychiatric Therapies, Vol. 22*. New York: Grune & Stratton, 177-187, 1984.

E. - rev. - human - user - inhal. - oral - dose/resp. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - epidem. - price - CNS - tremor - depression - stim. - psychol. - concent. - sleep - irritability - paranoia - psychosis - asthma - sex - aphrodisiac - anorexia - dependence - withdrawal - phys. det. - USA - S. Am. - coca leaf - *Erythrox. coca* - lidocaine - procaine - free-base - alcohol - amph. - PCP - antihist. - heroin

There are records of the chewing of coca leaves in South America dating back to 600 A.D. The medical uses of this drug were not reported until 1596 and the alkaloid, cocaine, was isolated from the plant *Erythroxylon coca* in 1855. A report by Sigmund Freud in 1884 contained praise of cocaine as a remedy for such ailments as depression, indigestion and asthma. Known today mainly for its CNS stimulant effects, it is also recognized as a local anesthetic and anorectic. Recreational users often experience talkativeness, euphoria and excitement. They feel self-confident and exhibit good ability to concentrate at low doses, but eventually suffer from tremors, seizures, anorexia, and acute paranoid psychosis as doses augment. Studies have shown that i.v users cannot tell the difference between cocaine and amphetamines administered experimentally. Common adulterants are lidocaine and procaine which may contribute to some of the adverse effects associated with street cocaine use. About five million Americans are thought to be regular users, and ten million have at least tried it. Free-basing, or smoking cocaine, delivers high concentrations rapidly into the system. Uncertainty regarding drug purity makes it difficult to estimate dose, and therefore overdoses can occur unexpectedly. Despite contradictory reports from others, the authors believe that there is a withdrawal syndrome associated with cocaine abuse, especially after free-basing. The syndrome is recognized by depression, irritability, sleep problems, g.i. disturbance and headache. It begins 24-48 hr after cessation of use and lasts 7-10 days. A typical cocaine abuser considers himself to be in a higher status level than an abuser of other drugs. This narcissistic tendency can influence treatment procedures because cocaine users will not be attracted to programmes which force them to identify with alcoholics, for example. A detailed discussion follows on different stages of treatment, including a psychological profile of the patient at each stage.

151 Isbell, H. and White, W.M.
CLINICAL CHARACTERISTICS OF ADDICTIONS.
American Journal of Medicine 14: 558-565, 1953.

E. - clin. pap. - human - user - heavy user - acute - chronic - inhal. - i.v. - inject. - intranasal - toxicity - CNS - hyperref. - tremor - psychomot. - subj. change - paranoia - euphoria - aggress. behav. - crim. behav. - mult. drug use - delusions - psychosis - halluc. - tact. halluc. - blood press. - pulse - respir. - hunger - sweating - mydr. - tolerance - withdrawal - sensitization - USA - dr. int. heroin - dr. int. morph. - opiates - analgesics - morph. - meperidine - barb. - bromides - cannabis

The authors discuss various forms of drug addiction of importance in the US, including opiate, synthetic analgesic, morphine, meperidine, barbiturate and bromide dependence. In a short passage on cocaine addiction, it is noted that this drug is usually taken in combination with morphine or heroin. The most common route of administration is i.v. injection. The striking subjective effects are described as ecstasy, physical and mental power, and freedom from hunger and fatigue.

Because these effects are so pleasurable, the addict will administer the drug repeatedly, thus incurring toxic symptoms. CNS stimulation is manifested by raised blood pressure, pulse, and respiration; sweating; mydriasis; tremors; muscle twitches and spasms. Convulsions, delusions, and paranoid psychosis often develop, along with a sensation that bugs are crawling beneath the skin. Violent behaviour in the form of assault to an imagined persecutor may occur. There is no tolerance or withdrawal symptoms, but rather an increased sensitivity with repeated use.

152 Isbell, H.
COCAINE POISONING.
Cecil-Loeb Textbook of Medicine, 11th Edition.
Saunders: Philadelphia, 1749-1751, 1963.

E. - bk. - gen. disc. - human - user - exper. user - acute - chronic - inhal. - oral - i.v. - dose/resp. - inject. - intranasal - anesth. - toxicity - treatm. - o.d. - tremor - resp. depr. - symp. NS - convuls. - stim. - vocaliz. - psychomot. - anxiety - euphoria - aggress. behav. - suicide - crim. behav. - mult. drug use - delusions - confusion - psychosis - halluc. - aud. halluc. - vis. halluc. - tact. halluc. - person. dis. - cardiovasc. - tachycard. - blood press. - hypertens. - card. arrest - allergy - respir. anorexia - sweating - mydr. - tolerance - habit - physical dep. - wt. loss - death - emaciation - S. Am. - USA - coca leaf - dr. comp. amph. - dr. int. opiates - dr. tr. amobarb. - dr. tr. pentobarb. - dr. tr. barb. - dr. tr. morph.

The author defines and discusses acute and chronic cocaine poisoning. Acute poisoning occurs as a result of accidental overdose, mistaking cocaine for another drug, or an idiosyncratic reaction. Lethal dose is variable, on average thought to be about 1.2 g, but known to have been as little as 20 mg. Characteristic of mild intoxication are talkativeness, laughter, anorexia, anxiety, and confusion. Large doses may result in hallucinations and delusions. Sympathetic nervous system stimulation is evidenced by tachycardia, raised blood pressure, mydriasis and sweating. Death can result after high doses due to respiratory collapse or cardiac arrest. Chronic poisoning, otherwise known as addiction, exists when a person uses cocaine to an extent that is harmful to himself or to society, or both. In the US, cocaine abuse via i.v. injection (most common route) is associated with deficient personalities and is often mixed with opiate consumption. Abusers can be recognized on account of their emaciation, malnutrition, and scars at injection site. They describe the pleasurable effects of cocaine as being similar to a sexual orgasm; however, the ecstasy is short-lived, and therefore repeated use is common. Habitués are nervous, tremulous, and subject to tachycardia, hypertension and mydriasis. They may complain of formication, visual and auditory hallucinations, and develop psychosis sometimes manifested by violent behaviour. There is no evidence for tolerance or physical dependence.

153 Jerí, F.R, Sanchez, C.C., del Pozo, T., Fernandez, M. and Carbajal, C.
FURTHER EXPERIENCE WITH THE SYNDROMES PRODUCED BY COCA PASTE SMOKING.
Bulletin on Narcotics 30(3): 1-11, 1978.

This article is identical to another published elsewhere. For annotation see: Citation 155

154 Jerí, F.R., Sanchez, C., del Pozo, T. and Fernandez, M.
THE SYNDROME OF COCA PASTE.
Journal of Psychedelic Drugs 10(4): 361-370, 1978.

E. - case rep. - rev. - human - male - female - adoles. - user - heavy user - acute - chronic - inhal. - dose/resp. - toxicity - treatm. - epidem. - stim. - psychiat. - paranoia - anxiety - euphoria - dysphoria - aggress. behav. - suicide - motiv. - sleep - crim. behav. - mult. drug use - irritability - delusions - interper. rel. - psychosis - aud. halluc. - vis. halluc. - tact. halluc. - tachycard. - pallor - asthma - sex. behav. - impotence - anorexia - sweating - dry mouth - vertigo - dependence - psych. dep. - body wt. - wt. loss - death - phys. det. - S. Am. - Peru - coca paste - tobacco - marihuana

Smoking coca paste, a mixture made of cocaine sulfate, ecgonine, other coca alkaloids, methanol and impurities, has become a significant health problem among the young people of Lima, Peru. The paste is consumed in cigarettes containing marihuana or tobacco, and produces a variety of effects depending on purity of paste, dose, frequency of use, environment, motivation, etc. The authors studied 158 psychiatric patients admitted for problems relating to coca-paste smoking between 1974 and 1977. Most smoked about a gram, in fragments, and the heavier the habit the more they tended to smoke alone. The majority were male (97.4%), single (74.8%), and from middle or low-income brackets (74.6%). Sessions of smoking sometimes lasted for days. Initial intoxication produced euphoria, but anxiety, anorexia, and a compulsive desire for more drug developed after only a short while. Motivations for use included socialization, recreation, sexual enhancement and relief from unpleasant situations. Tactile and visual hallucinations were common, the former often experienced as insects crawling beneath the skin. At the end of a long smoking session, additional problems such as insomnia and impotence arose. Criminal activity was resorted to when the paste supply ran out. A table is given outlining other signs observed frequently in the 158 patients (e.g., pallor, low weight, and unkemptness). Serious complaints like convulsions and paranoid psychosis also occurred, but less often (1.2% and 3.7%, respectively). Several case reports indicate other reactions such as dysphoria, panic, aggression, asthma attacks, suicide attempts and delusions. In one 25-year-old man, frequent heavy use led to a severe psychotic reaction which lasted for weeks. In their final comments, the authors express the opinion that a new epidemic of drug dependence is occurring in Peru with grave consequences to many consumers. The problem should be investigated and controlled.

155 Jerí, F.R., Sanchez, C.C., de Pozo, T., Fernandez, M. and Carbajal, C.
FURTHER EXPERIENCE WITH THE SYNDROMES PRODUCED BY COCA PASTE SMOKING.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 76-85, 1980.

E. - book - clin. pap. - human - male - female - adolesc. - y. adult - adult - user - acute - chronic - inhal. - toxicity - price - resp. depr. - vertigo - tremor - convuls. - depression - stim. - vocaliz. - psychomot. - percep. - anxiety - paranoia - euphoria - dysphoria - suicide - homicide - sleep - crim. behav. - prog. drug use - irritability - delusions - thought disorder - psychosis - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - tachycard. - blood press. - card. arrest - pallor - respir. - asthma - sex. behav. - nausea - vomiting - thirst - anorexia - musc. - sweating - mydr. - compulsion - wt. loss - hypertherm. - death - age - S. Am. - Peru - coca paste - dr. int. tobac. - dr. int. cannabis - amph. - ethanol

One hundred and eighty-eight patients were treated in Lima, Peru, for health or social problems resulting from coca paste addiction. Often the paste was smoked with tobacco or marihuana, yielding initial positive effects of sociability and talkativeness. However, soon negative effects began to occur, such as work- or marriage-related problems, inability to pay debts, and involvement in drug-trafficking. Over 96% of the patients were male, aged 16-20 or 21-25 years, most with high school education. Those who were examined during acute intoxication exhibited a mixture of anxiety and euphoria, with a compulsion to smoke more and more of the coca paste cigarettes. Other common symptoms were anorexia, insomnia, paranoia and irritability. Sexual indifference was more frequent than sexual stimulation. Other less common effects included vertigo, suicide attempts and jealousy. Physically, 68% or more presented with low weight, neglected appearance and paleness. Tachycardia, mydriasis and depression were noted in slightly less than half the population. Rare occurrences were convulsions, respiratory depression and cardiac arrest. Visual, auditory, olfactory and tactile hallucinations were reported by some. A paranoid psychosis lasted for as long as two weeks in some patients, and three died (two by acute intoxication and one by suicide). The phases of intoxication in paste smoking are like those observed in the consumption of cocaine hydrochloride: euphoria, dysphoria, hallucinosis and psychosis. A typical pattern of progressive drug use would be from tobacco cigarettes to marihuana to coca paste-tobacco cigarettes: preferred alternatives in the absence of coca paste are amphetamines, cannabis or alcohol. Consumed at a rate of 40 to 60 g a day, the cost of coca paste becomes prohibitive (about $60 or 2/3 of a monthly salary for one day's pleasure). Hence the pattern of criminal and antisocial behavior in heavy users.

156 Joël, E. and Fränkel, F.
KOKAINISMUS UND HOMOSEXUALITÄT. [Cocaine Dependence and Homosexuality]. (Ger).
Deutsche Medizinische Wochenschrift 38(Sept.): 1562-1565, 1925.

G. - gen. disc. - human - male - female - adult - user - sex - sex. behav. - impotence - aphrodisiac - homosexual - morph. - alcohol

Sexual aberrations are known to occur after the use of such drugs as alcohol, morphine and cocaine. Cocaine in particular has been associated with homosexual practices, sometimes after only a short period of use. The authors have observed this problem in their clinical practice, and wonder whether homosexuals happen to be attracted to cocaine or whether cocaine causes the libido of heterosexuals to take a new direction. Some patients reported having their first homosexual experience (including thoughts about homosexual activity) under the influence of cocaine, whereas others reported having fantasized about homosexual experience previously but never having had the courage to engage in it until trying cocaine. These latter are classified as latent homosexuals. Many men describe cocaine as an aphrodisiac at first, but discover after repeated use that it can lead to impotence or premature ejaculation. Despite impotence, they may continue to feel sexually aroused and prefer acting as passive partners in sexual intercourse; this could account for some cases of homosexual behaviour induced by cocaine, and is referred to by certain authors as pseudohomosexuality. Frequent masturbation is also common among cocaine users, though it must not be forgotten that others engage in no sexual perversions even with regular use.

157 Johns, M.E., Berman, A.R., Price, J.C., Pillsbury, R.C. and Henderson, R.L.
METABOLISM OF INTRANASALLY APPLIED COCAINE.
Annals of Otology, Rhinology and Laryngology 86(3): 342-347, 1977.

E. - clin. pap. - exp. pap. - human - animal - rabbit - primate - dog - acute - i.p. - top. admin. - intranasal - therap. admin. - anesth. - toxicity - therap. use - chem. - crim. behav. - pharmacokin. - allergy - convuls. - epineph. - urine - nose - death - Erythrox. coca

For nasal surgery cocaine, the alkaloid of the shrub Erythroxylon coca, is considered the anesthetic of choice. Two problems are associated with the drug, however; one is the difficulty in determining lethal or toxic dose, and the other, the risk of theft by drug abusers. Regrettably, little is known about the metabolism and hazards of cocaine consumption in human beings. Toxic effects have been studied experimentally in animals, but not in man. Even though 200 mg is generally stated as the highest safe dose for topically applied cocaine, there is evidence of negative reactions to much smaller amounts. Twelve patients gave serum samples after 200 mg of 4% cocaine applied topically in nasal surgery. After 15 min, the presence of significant amounts of benzoylecgonine demonstrated the quick absorption and metabolism of cocaine. Peak levels of cocaine occurred at one hour, suggesting that prompt reactions to the drug may not be dose-related so much as related to the increase of titres in the serum and extended exposure. It is difficult to say with certainty what the maximum safe dose is, since this amount varies with route of administration, site of application, method of application, and rate of metabolism. The authors urge physicians to use the least possible amount of this drug in surgical procedures until more is known about its toxicity in humans.

158 Jonsson, S., O'Meara, M. and Young, J.B.
ACUTE COCAINE POISONING. IMPORTANCE OF TREATING SEIZURES AND ACIDOSIS.
American Journal of Medicine 75(6): 1061-1064, 1983.

E. - case rep. - clin. pap. - human - male - adult - acute - toxicity - treatm. - seizure - reac. time - psychomot. - crim. behav. - halluc. - heart - heart rate - tachycard. - hypotens. - card. arrest - EKG - pulse - respir. - g.i. - sweating - death - body temp. - dr. tr. diaz. - dr. tr. propan.

Very few victims survive the trauma of cocaine poisoning because of its sudden onset and rapidly lethal course. A case report is given of a 44-year-old male smuggler who was admitted to hospital with 14 rubber condoms containing cocaine in his rectum. Blood pressure was 140/70 mm Hg; pulse, 86 beats per minute; and respiration, 16 breaths per minute. After oral laxatives, the patient passed 11 condoms each of which held about 20 g cocaine. One hour after an enema the next day, the patient showed signs of agitation; diaphoresis; tachycardia; generalized seizure; apnea; rapid, feeble pulse; and hypotension. It was discovered that one of the remaining three condoms had ruptured when they were removed digitally. Diazepam and sodium bicarbonate were given i.v. The patient was fully alert after four hours, and the next day showed normal EKG. The authors stress the importance of treating acidosis and controlling seizures in order to manage victims of cocaine poisoning successfully.

159 Jordan, N.
COCAINE: SEDUCTION AND SOLUTION.
Psychology Today 18(4): 13, 1984.

E. - bk. rev. - case rep. - human - user - depression - sex. behav. - dependence - motiv. - habit

The author gives a favourable review of the book Cocaine: Seduction and Solution by Stone, N. et al. (New York: Clarkson N. Potter Inc., pp. 276, 1984). He describes it as a nonjudgmental, reasonable, and possibly useful source of direction for cocaine-dependent individuals who want to quit. The recent popularity of this drug may be due to its ability to produce feelings valued by modern society such as powerfulness and sexual confidence. Some users allow cocaine to jeopardize every facet of their lives because they no longer have any control over their consumption.

160 Kalant, O.J.
THE VAGARIES OF DRUGS.
Addictions 21(4): 75-80, 1974.

This article is roughly similar to another published elsewhere, with an additional comment regarding the relationship between journalism and trends in drug use.

Cocaine Kalant, O.J.

For annotation see: Citation 161

161 Kalant, O.[J.]
IN PERSPECTIVE: COCAINE.
The Journal 7(4): 10-11, 1978.

E. - rev. - human - animal - male - user - acute - chronic - exp. admin. - inhal. - oral - s.c. - i.v. - inject. - top. admin. - intranasal - anesth. - toxicity - therap. use - hist. of coc. - law - o.d. - price - CNS - hyperref. - musc. weak. - tremor - seizure - epilepsy - coma - resp. depr. - symp. NS - convuls. - depression - stim. - vocaliz. - psychomot. - pain - anxiety - paranoia - euphoria - suicide - homicide - sleep - delusions - affect - orientation - schizophrenia - psychosis - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - heart rate - card. arrest - pallor - hemorrhage - respir. - sex. behav. - impotence - nausea - constip. - hepatitis - hunger - appetite - anorexia - urination - skin - sweating - nose - mydr. - vision - tolerance - dependence - physical dep. - psych. dep. - withdrawal - sensitization - compulsion - hypertherm. - wt. loss - death - USA - S. Am. - Peru - Bolivia - coca leaf - dr. comp. amph. - dr. int. heroin - cannabis - morphine - ethanol

The author points out that the recent popularity of cocaine as a recreational drug in the US finds its parallel in the early 1920s, at which time there was impressive documentation (mainly in French and German) of its clinical effects. After a brief history of the isolation of the alkaloid and early medical applications, there follows a detailed discussion of cocaine's dependence-producing and toxic potential. A certain percentage of cocaine users will become compulsive and may escalate their dose from the range of 200 to 300 mg to two to three grams a day. This tendency to increase dose suggests tolerance development, but some researchers contend that cocaine induces sensitization rather than tolerance. The physical symptoms accompanying withdrawal are not severe (disturbed sleep, large appetite and depression). The physical effects of intoxication, both acute and chronic, are: rapid heart rate, pallor, sweating and mydriasis. Continued CNS stimulation can lead to constipation, difficulty in urinating, and impotence. Route of administration is also related to some adverse consequences. For example, s.c. or i.v. injection can produce scars, abscesses and skin atrophy; sniffing can result in eczema around the nostrils, runny nose, and perforation of the nasal septum. The mental effects of long-term use are perhaps more striking, however, and include restlessness, hyperexcitability, and suspiciousness which replace the initial euphoria.

Hallucinations of all the senses may occur along with delusions of persecution and of grandeur. This condition is like amphetamine psychosis which in turn resembles paranoid schizophrenia. The rise in popularity of cocaine has paralleled the fall in popularity of amphetamine. These two drugs, though similar in many respects, are distinguished by the fact that cocaine is a powerful local anesthetic (amphetamine is not) and the rate of metabolism of cocaine is higher than that of amphetamine. If death occurs from cocaine intoxication, it will be due to respiratory arrest following coma, anesthesia, central depression, and sometimes epileptic seizures. The author concludes that present-day researchers who are interested in cocaine can still profit from the knowledge accumulated several decades ago.

162 Kane, F.J., Jr. and Taylor, T.W.
MANIA ASSOCIATED WITH THE USE OF I.N.H. AND COCAINE.
American Journal of Psychiatry 119: 1098-1099, 1963.

E. - case rep. - clin. pap. - human - male - adult - White - acute - inhal. - therap. admin. - intranasal - toxicity - treatm. - CNS - stim. - depression - abnor. behav. - psychmot. - memory - psychiat. - paranoia - aggress. behav. - vocaliz. - hyperact. - affect - orientation - mania - psychosis - halluc. - vis. halluc. - lacrimation - epineph. - isonicotinic acid hydrazide - chlorpromazine - pyradoxine - L.S.D.

A case report is given of a 49-year-old white man who exhibited bizarre behaviour after prescribed use of isonicotinic acid hydrazide. He was suspicious, verbally aggressive, hyperactive, and experienced visual hallucinations. After appropriate medical treatment, he improved and was discharged. Thirty years previously he had been admitted to hospital for manic-depressive psychosis following a week of prescribed cocaine inhalation for sinusitis. In both instances, this man was the victim of excessive CNS stimulation. The authors recommend that physicians be alert to this type of reaction now that "compounds of this kind" are being used more often in the treatment of mental disorders.

163 Kegley, C.F. and Thomas, J.A.
COCAINE: OLD DRUG, NEW PROBLEMS.
Journal of School Health 47(10): 600-602, 1977.

E. - gen. disc. - clin. pap. - human - user - acute - chronic - inhal. - oral - dose/resp. - inject. - top. admin. - intranasal - anesth. - toxicity - therap. use - treatm. - hist. of coc. - chem. - law - o.d. - price - CNS - tremor - reac. time - resp. depr. - brain - brain chem. - convuls. - depression - stim. - psychomot. -

paranoia - euphoria - sleep - hypotens. - card. arrest - respir. - asthma - aphrodisiac - epineph. - liver - vomiting - hunger - nose - tolerance - dependence - physical dep. - psych. dep. - withdrawal - hypertherm. - death - body temp. - USA - S. Am. - Peru - Bolivia - Colombia - Europe - coca leaf - Erythrox. coca - coc. crystals - Coca-Cola - cannabis - procaine - barb.

The problem of cocaine abuse has become prevalent in North America for the second time in history in the 1970s; the first wave of popularity occurred in the early 1900s. In the more distant past (around 100 A.D.), there are records of its anesthetic properties having been used in a surgical procedure called trephining. Efforts to discourage present-day South American natives from chewing coca leaves have generally failed. The only legitimate use for the drug today in the US is as a local anesthetic, especially in otolaryngology procedures, but recreational use is based rather on its CNS-stimulating properties. Euphoria, restlessness and excitement will result once the brain cortex has been affected. Low doses may lead to increased motor activity, whereas large doses will cause loss of motor coordination. Toxic dose is generally considered to be about one gram, after which tremor, convulsions and cardiopulmonary arrest will lead to death. However, as little as 20 mg has been fatal in some cases. Its CNS effects include a depression of vasomotor and vomiting centres as well as an activation of heat regulation, causing the body temperature to rise. Sniffing is an effective means of administration because of rapid absorption through mucous membranes, though many abusers also inject. Long-term use can produce such negative consequences as nervousness, depression, insomnia, psychic dependence, and paranoid psychosis. Physical dependence characterized by a withdrawal syndrome has not been documented, but tolerance evidenced by increasing doses (up to 10 g daily) may develop. Both first-time users and habitués can experience undesirable effects. If overdose does not end in death, it may nonetheless lead to permanent brain damage. Cocaine costs about $1000/ounce on the street. In the US, the number of arrests relating to this drug has risen since 1970.

164 Khantzian, E.J.
AN EXTREME CASE OF COCAINE DEPENDENCE AND MARKED IMPROVEMENT WITH METHYLPHENIDATE TREATMENT.
American Journal of Psychiatry 140(6): 784-785, 1983.

E. - case rep. - clin. pap. - human - female - adult - child - heavy user - chronic - self-admin. - inhal. - i.v. - dose/resp. - intranasal - toxicity - treatm. - price - reac. time - coma - depression - stim. -

psychomot. - subj. change - psychiat. - anxiety - paranoia - suicide - lethargy - sleep - crim. behav. - prog. drug use - delusions - affect - halluc. - aud. halluc. - vis. halluc. - tact. halluc. - person. dis. - blood press. - pulse - appetite - urine - skin - dependence - withdrawal - body wt. - wt. loss - age - phys. det. - dr. tr. methylphenidate - amph.

The number of cases presenting with toxic reactions to cocaine abuse increased significantly from 1973-1983. Effective treatment is not easy to achieve. However, the author gives a case report of a 33-year-old female heavy stimulant abuser (amphetamine followed by cocaine) whose condition of extreme dependence was helped markedly by prescription of methylphenidate. Her amphetamine habit had begun after the drug was prescribed for her as an appetite suppressant in the eighth grade. She used the drug illicitly for twenty years to improve her energy, school performance and self-esteem. At age 28 yr, she began to snort cocaine. She used cocaine exclusively thereafter, escalating the dose and shifting to i.v. administration. By the time she was using two ounces a day, her habit had a street value of $5000 a week. On only one occasion in the past had she ceased her stimulant abuse, and that was when methylphenidate was prescribed for depression in her early twenties. During one year of methylphenidate treatment she felt much healthier than usual and was free from other drug use. The author, her physician, first observed her after a period of six days abstinence from cocaine. She was dirty, nervous, insomniac, suicidal and lethargic. Paranoid delusions and auditory, visual, and tactile hallucinations added to her misery. Knowing her history, the author prescribed 15 mg methylphenidate t.i.d. and noticed an improvement in her condition after as little as one and a half hours. Within 24 hr, she ceased to hallucinate, slept well, and had a good appetite. Twenty weeks later she was continuing the treatment with steady improvement in her physical and mental condition, and freedom from illicit drug use. The author comments on possible uses of methylphenidate in treating similar cases of drug abuse.

165 Khantzian, E.J.
CAUTIONARY NOTE ON METHYLPHENIDATE FOR COCAINE DEPENDENCE.
American Journal of Psychiatry 141(2): 328, 1984.

E. - lett. ed. - case rep. - human - child. - female - treatm. - stim. - depression - law - affect - dependence - addiction - abstinence - death - dr. tr. amph. - methadone - narcotics

The author defends the use of methylphenidate, a stimulant, in the treatment of extreme cases of cocaine dependence which he describes as a "desperately destructive, poorly understood and poorly treated problem." However, he admits that this type of treatment should not be casual as it does entail risks. Drug addiction is a form of psychopathological behaviour which does not always respond well to human intervention. The approach of drug substitution should be investigated scientifically before it is either condemned or condoned.

166 Kilham, C.S.
CASE OF COCAINE POISONING.
Lancet, p. 17, Jan. 1, 1887.

E. - case rep. - human - male - acute - self-admin. - oral - dose/resp. - therap. admin. - toxicity - treatm. - o.d. - tremor - seizure - reac. time - vertigo - speech - pain - subj. change - dysphoria - suicide - sleep - thought disorder - body percep. - confusion - pulse - stom. - vomiting - dry mouth - sweating - foot - leg - hand - vision - hydrochloride - dr. tr. brandy

A case report is given of a man who accidentally took approx. 360 mg cocaine hydrochlorate in solution form. After 20 min, he suffered from severe stomach cramps, nausea, throbbing head, loss of eyesight, non-functional legs, incoherent speech, confusion and drowsiness. After 40 min, he began to sweat abundantly, shake, retch and vomit. Cramps developed in the legs and feet with tingling and numbness in both hands. He was prostrate for about five hours, but even when able to move continued to feel weak with "swimming of head all night." The last symptom to disappear was the numbness of fingers which lasted for about six days. The author remarks that this patient had an intermittent pulse which had not been recorded as an effect of cocaine poisoning before.

167 Klabacha, M.E., Miller, S.H., Pav, J.M. and Demuth, R.J.
INADVERTENT INTRARADIAL ARTERIAL INJECTION OF COCAINE.
Annals of Plastic Surgery 13(1): 60-62, 1984.

E. - case rep. - clin. pap. - human - rabbit - dog - male - adult - user - i.v. - inject. - treatm. - hepatitis - bl. vess. - pulse - blood - arm - hand - musc. - skin - pain - USA

Intravenous injection used to be a relatively uncommon route of administration among street drug users, but lately it is gaining popularity. Thrombosis (blood clotting) of the superficial veins occurs after several injections, making the practice uncomfortable. At this point, users will try to inject into normal or aberrant arteries, sometimes resulting in injury. A 22-year-old male addict injected a mixture of cocaine and water into the right radial artery of the wrist. He experienced immediate pain in the hand. In emergency two hours later, he showed many needle scars on both arms and paleness and discoloration of the hand. The pain became worse after six hours. After surgery and medication, the pain diminished and motor function improved. A discussion follows concerning recommended treatment for similar problems.

168 Kolb, L.
DRUG ADDICTION AND ITS RELATION TO CRIME.
Mental Hygiene 9(1): 74-89, 1925.

E. - gen. disc. - human - user - acute - law - o.d. - stim. - abnor. behav. - subj. change - paranoia - anxiety - aggress. behav. - homicide - crime. behav. - motiv. - disinhib. - heroin - morphine - opiates

Although the author discusses mainly heroin and morphine in this paper, he also briefly describes the relationship between cocaine abuse and crime. Cocaine is a physical and mental stimulant which enhances confidence and courage up to a point. However, beyond that point it causes insecurity, fear and anxiety. Unless he takes too much, a criminal may become temporarily more efficient as a result of cocaine consumption. The drug does not cause anyone to become a criminal, but encourages the person who is already a criminal to carry out his impulses. Too much cocaine will create a suspicious, nervous mental state in criminal and non-criminal alike. Acts of violence may accompany paranoia (often taking the form of fear of police). One cocaine user was known to attack a laundry bag thinking it was a policeman. Crimes committed by the cocaine user are likely to be impulsive and motivated by fear rather than deliberate and planned ahead of time.

169 Kosman, M.E. and Unna, K.R.
EFFECTS OF CHRONIC ADMINISTRATION OF THE AMPHETAMINES AND OTHER STIMULANTS ON BEHAVIOR.
Clinical Pharmacology and Therapeutics 9(2): 240-254, 1968.

E. - rev. - human - animal - rat - guinea pig - rabbit - dog - cat - primate - user - chronic - exp. admin. - oral - i.v. - inject. - top. admin. - toxicity - convuls. - depression - stim. - subj. change - learning - delusions - psychosis - tolerance - withdrawal - sensitization - death - S. Am. - coca leaf - dr. comp. amph. - dr. int. barb.

With the recent rise in popularity of stimulant drugs such as cocaine and amphetamine, clinicians are naturally concerned about the behavioural effects of prolonged use. Cocaine and amphetamine cause similar subjective effects, but those of cocaine are shorter-lasting. At high enough doses, both drugs can produce psychosis. It is important to distinguish between the abuse of cocaine as practised in North America and the chewing of coca leaves by the Andean Indians of South America; this latter behaviour is not associated with psychosis or withdrawal problems, but seems to be an adaptation to high altitude stress. By contrast, the addict applies the drug to oral or nasal mucous membranes or injects it i.v. (the most dangerous route of administration), and often combines cocaine with depressant drugs. Sudden withdrawal may lead to depression and fatigue, but not to any other form of abstinence syndrome. It has been suggested that certain delusions may persist for some time after cessation of use. Chronic administration to experimental animals has given no indication of tolerance development, but rather seems to cause a more severe reaction. Combining cocaine and barbiturates has led to enhanced hyperactivity (also in experimental animals). Cocaine has been shown to increase physical stamina and lessen recovery time from exhaustion in dogs, and had no permanent negative effect on the learning ability of rats once they were drug-free after prolonged administration of 40 mg.

170 Lesko, L.M., Fischman, M.W., Javaid, J.I. and Davis, J.M.
IATROGENOUS COCAINE PSYCHOSIS.
New England Journal of Medicine 307(18): 1153, 1982.

E. - lett. ed. - human - male - adult - top. admin. - anesth. - therap. admin. - treatm. - side-effect - CNS - tremor - reac. time - vocaliz. - concent. - paranoia - sleep - irritability - delusions - psychosis - vis. halluc. - aud. halluc. - tact. halluc. - pulse - nausea - vomiting - fever - dr. tr. diaz.

Frequent use of heavy doses of cocaine is associated with paranoid psychosis characterized by restlessness, lack of concentration, hallucinations, delusions and compulsiveness. A 22-year-old man suffering from septic shock received 3 ml of 10 per cent cocaine every four hours as part of his treatment. He subsequently suffered from rapid pulse, nausea, vomiting, headache, insomnia, chills and fever. Irritable and talkative, he thought he saw ants everywhere and engaged in nervous activity such as pacing his room. Withdrawal from cocaine combined with diazepam medication induced sleep for 10 hr, but the patient continued to exhibit suspiciousness upon awakening. Only sixty hours later did he become symptom-free. The authors conclude by recommending that physicians become more aware of the side-effects of cocaine.

171 Lichtenfeld, P.J., Rubin, D.B. and Feldman, R.S.
SUBARACHNOID HEMORRHAGE PRECIPITATED BY COCAINE SNORTING.
Archives of Neurology 41(2): 223-224, 1984.

E. - case rep. - clin. pap. - human - female - adult - user - daily - user - acute - inhal. - dose/resp. - intranasal - anesth. - toxicity - treatm. - CNS - neurol. - resp. depr. - convuls. - brain - brain chem. - euphoria - sleep - suicide - homicide - psychosis - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - gust. halluc. - heart rate - card dysrhyth. - blood press. - blood - hemorrhage - epineph. - nausea - vomiting - appetite - nose - mydr. - dependence - death - USA

An estimated two million Americans use cocaine every year. Many snort the drug for its psychoactive effects at concentrations that are 50 to 1000 times greater than those found in the natural plant. Two case reports are given to illustrate the potential hazard of intracranial hemorrhage from cocaine snorting, a practice which is erroneously thought by some to be safe. The first, a 29-year-old woman, experienced severe headache and brief alteration of consciousness several minutes after snorting cocaine. Aneurysm was revealed by a computed tomographic (CT) scan, for which surgery was successfully performed. The second, a 24-year-old female daily user, also developed severe headache with nausea and vomiting after her usual dose of two "thick lines." A CT scan showed intracranial hemorrhage. The patient's neurological condition returned to normal after many days, but the headache persisted for weeks. In their general comments, the authors note such documented effects of cocaine use as loss of appetite; greater creativity, physical and sexual performance; short-lived psychosis; visual, tactile, olfactory, gustatory and auditory hallucinations; post-drug depression, and occasional nasal septum perforation; increased heart rate and blood pressure; cardiac dysrhythmias; anesthesia; mydriasis; alertness; convulsions; disturbed sleep; euphoria; and drug-seeking behaviour. They suspect that the hemorrhage in both reported cases was a result of cocaine snorting, though it could have been a spontaneous occurrence. Fatalities have been reported from intranasal intake of cocaine, and the two cases of hemorrhage demonstrate that important neurological sequelae may attend this route of administration.

172 Lipsius, L.H.
LITHIUM IN COCAINE-INDUCED PSYCHOSIS.
Southern Medical Journal 75(5): 640, 1982.

E. - lett. ed. - human - user - treatm. - psychosis - dr. tr. lithium

The author responds to another letter about lithium treatment for cocaine psychosis (Scott, M.E. and Mullaly, R.M., South. Med. J. 74: 1475, 1981). He questions the value of this treatment because of the unpredictability of the addictive personality which may make it dangerous to administer lithium.

173 Lundberg, G.D., Garriott, J.C., Reynolds, P.C., Cravey, R.H. and Shaw, R.F.
COCAINE-RELATED DEATH.
Journal of Forensic Sciences 22(2): 402-408, 1977.

E. - case rep. - clin. pap. - human - male - female - adult - y. adult - user - White - acute - chronic - inhal. - i.v. - dose/resp. - inject. - intranasal - top. admin. - anesth. - toxicity - treatm. - law - o.d. - CNS - neurol. - seizure - reac. time - resp. depr. - brain - convuls. - stim. - anxiety - suicide - mult. drug use - schizophrenia - mydr. - tachycard. - card. arrest - blood - hemorrhage - skin - lungs - pulm. ed. - stom. - nausea - liver - kidney - vomiting - urine - spleen - death - autops. - rigor mortis - USA - ethanol - lidocaine - methaqualone - mepivacaine - cannabis - morph. - phenmetrazine - phendimetrazine - amitriptyline - nortriptyline

In the US today, cocaine, an anesthetic and intoxicant, is enjoying a revival of general popularity despite its illegal status. Three case reports are given in which cocaine alone appears to be responsible for death, and six others in which cocaine was related to, but not solely responsible for, fatality. One example of a cocaine-alone death is that of a 16-year-old white female who injected 0.5 g cocaine i.v. Eight hours later she died in spite of emergency care. Toxicological analysis of blood, brain, liver, etc., revealed the presence of no other drug, and pathological findings included pulmonary edema, fresh needle marks at many sites, and hepatic inflammation. An example of a fatality in which cocaine was involved but not solely responsible is that of a 28-year-old schizophrenic male who administered cocaine into his rectum. He began to yell, kick, and scream. In hospital, he experienced respiratory and cardiac arrest and died three and a half days later. Neurological findings included evidence of irreversible CNS damage, cerebral edema, lacerated tongue, and the presence of phenmetrazine, phendimetrazine, amitriptyline and nortriptyline in the urine as well as cocaine. These reports indicate that even if cocaine toxicity is uncommon, nevertheless it does occur and is particularly precipitated by the i.v. route of administration. Overdose produces excitement, anxiety, headache, nausea and vomiting and can be lethal. The combination of cocaine and other drugs should be looked for in cases of unexpected toxic effects.

174 Marks, V. and Chapple, P.A.L.
HEPATIC DYSFUNCTION IN HEROIN AND COCAINE USERS.
British Journal of Addiction 62: 189-195, 1967.

E. - clin. pap. - human - user - chronic - i.v. - inject. - toxicity - liver - hepatitis - jaundice - psychiat. - USA - dr. int. heroin - barb. - cannabis - ethanol - amph.

Eighty per cent of liver function tests carried out in a sample of 89 heroin and cocaine users showed abnormalities. Six were jaundiced. In some cases, it was observed that cessation of i.v. heroin and cocaine injections resulted in quick restoration of normal liver function. Similar liver damage was not discovered in patients who used only amphetamines, barbiturates or cannabis. The authors speculate that there may be four causes of the high percentage of liver problems in heroin and cocaine abusers: (1) poor diet, concomitant alcoholism, and strenuous activity; (2) direct hepatotoxic effect of heroin and cocaine when taken i.v. in combination; (3) other contaminants unwittingly injected; and (4) bacteria which enter the bloodstream directly through septic materials.

175 Masi, R.J.
ENDOGENOUS ENDOPHTHALMITIS ASSOCIATED WITH BACILLUS CEREUS BACTEREMIA IN A COCAINE ADDICT.
Annals of Ophthalmology 10(10): 1367-1370, 1978.

E. - case rep. - human - female - y. adult - Black - i.v. - inject. - toxicity - pain - eye - lacrimation - vision - heroin - methadone

A 22-year-old black female i.v. cocaine abuser presented with endophthalmitis of the right eye (inflamed internal tissues). She complained of pain, loss of vision, and watery discharge. Blood cultures revealed the growth of Bacillus cereus, suggesting that this agent was responsible for the inflammation. Treatment was successful but the patient continued to suffer from wasting of tissue (phthisis) in one eye. Such cases of eye infection have not been reported frequently in relation to cocaine abuse.

176 Mattison, J.B.
COCAINE DOSAGE AND COCAINE ADDICTION.
Lancet (May 21): 1024-1026, 1887.

E. - gen. disc. - clin. pap. - human - male - user - acute - chronic - s.c. - dose/resp. - inject. - anesth. - toxicity - therap. use - o.d. - thought disorder - neurosis - pallor - pulse - skin - anorexia - sweating - eye - habit - addiction - craving - death - opium - morph. - ethanol

Having heard a report of a Russian physician who killed himself because he believed he had been responsible for a fatal cocaine overdose in one of his patients, the author emphasizes the potential harmfulness of this drug. He admits its therapeutic usefulness, especially in ophthalmic surgery, but cautions against forgetting that it is also a toxic, potentially lethal substance which should never be regarded as harmless. There is definitely such a thing as cocaine addiction which results from frequent use; some have been known to take it 20 or more times a day. Moreover, the number of persons suffering from "pure, primary" dependence on cocaine is increasing. The favourable effects include relief from fatigue, cheerfulness, and exhilaration; the negative effects include craving, nervousness, insomnia, anorexia and subjugation to the drug. It is not possible to state what the safe dose is, since a dose usually considered acceptable can be fatal in certain individuals, especially administered s.c.

177 Mattison, J.B.
COCAINISM.
Medical Record 42 (October 22): 474-477, 1892.

E. - clin. pap. - gen. disc. - human - heavy user - acute - chronic - inhal. - oral - s.c. - inject. - top. admin. - anesth. - toxicity - therap. use - treatm. - CNS - tremor - brain - stim. - pain - speech - cognit. - memory - psychiat. - paranoia - euphoria - suicide - homicide - sleep - mult. drug use - delusions - thought disorder - interper. rel. - psychosis - aud. halluc. - vis. halluc. - tact. halluc. - gust. halluc. - olf. halluc. - disinhib. - neurosis - heart - card. arrest - pallor - pulse - respir. - sex. behav. - impotence - g.i. - intest. - liver - jaundice - anorexia - bladder - kidney - urine - skin - sweating - tongue - mydr. - vision - tolerance - habit - withdrawal - craving - death - wt. loss - fever - ethanol - morphine - opium - codeine - phenacetine - chloralamid - sulphanol

The author speaks out against the opinion held by certain physicians that there is no such thing as cocaine addiction. He cites his own research in which several cases of death and toxicity from cocaine abuse have been documented. Cocaine is a praiseworthy anesthetic, but is also dangerous because of its ability to produce dependence, especially in those who use it in an attempt to escape from other addictions (e.g., alcohol or opium). In fact, most cases of habituation to this drug begin with therapeutic administration. Although at first cocaine may seem to produce only benign effects such as freedom from fatigue and overall exhilaration, eventually continual indulgence results in urgent craving for more, nervousness, tremors, insomnia, anorexia and neurasthenia. It is "the most fascinating and seductive, dangerous and destructive, drug extant." Subcutaneous injection is the most risky means of administration and is usual among chronic users. However, it can also be swallowed, sniffed, or applied topically. Habitués tend to increase the dose rapidly and repeat administrations sometimes every fifteen minutes, for hours. The consequences of long-term use are outlined under the headings of digestion, respiration, circulation, liver, kidneys, sex, nutrition and nervous system. Briefly, cocaine is an absolute anorexic, and leads to many disorders of the g.i. tract. Dyspnea can occur because of impaired vasomotor function. Rapid pulse and cardiac palsy can prove fatal. Jaundice and hepatic dysfunction; increased action of kidneys; boils, sweating, pallor, fever and dry skin have been reported. Sexual activity is enhanced at first, but impotence occurs with excessive intake. Apart from its deleterious action on the CNS, the worst consequence of cocainism is anorexia which leads to emaciation and glandular impairment. It ravages the nerves, causes hyperstimulation, fugitive pains, and hallucinations. Many patients feel as though worms were crawling beneath the skin. Delusions of persecution and homicidal tendencies can be difficult to diagnose and to treat. On the moral level, cocaine addicts are often selfish, malicious and irresponsible. The prognosis for these unfortunates is bleak, but successful treatment can be achieved with prolonged hygienic care, favourable surroundings and active medical intervention.

178 Mattison, J.B.
COCAINISM.
Medical Record 43(January 14): 34-36, 1893.

E. - case rep. - human - male - adolesc. - y. adult - adult - chronic - inhal. - s.c. - dose/resp. inject. - top. admin. - intranasal - toxicity - therap. admin. - treatm. - hyperref. - musc. weak. - brain - vertigo - convuls. - depression - abnor. behav. - speech - pain - memory - psychiat. - anxiety - paranoia - euphoria - aggress. behav. - suicide - homicide - sleep -

hyperact. - delusions - affect - thought disorder - body percep. - interper. rel. - confusion - irritability - mania - psychosis - aud. halluc. - vis. halluc. - person. dis. - heart rate - card. arrhyth. - pallor - pulse - respir. - impotence - vomiting - interest. - anorexia - urine - incontinence - skin - sweating - habit - withdrawal - wt. gain - wt. loss - hypertherm. - body temp. - death - age - emaciation - ethanol - morph. - tobac.

The author gives 17 succinct case reports which illustrate the perils of chronic cocaine consumption. All the cases are males, varying in age from 14 to 63 years, and ten are physicians. In most instances, the abuse of cocaine stemmed from initial prescribed use for such ailments as catarrh, nasopharyngeal disease, coryza and hay fever. The seductiveness of the drug led to habituation, producing a great number of effects in all cases, including: insomnia, gastric torpor, heart derangement, indecision, inability to work (Case 1); anorexia, emaciation, nervousness, depression, vertigo and weakness (Case 2); staggering gait, raised temperature, rapid heart rate, and loss of interest in friends (Case 3); loquaciousness, restlessness, and feelings of physical strength (Case 4); psychosis (Case 5); pallor, sweating, incontinence, and convulsions (Case 6); sluggish bowels, irregular respiration, copious urine, exaggerated emotion, and visual and aural hallucinations (Case 7); impotence, violent mental excitement, and death (Case 8); neurasthenia (Case 9); exhilaration followed by narcosis, paroxysms, paralysis, and death (Case 10); irrational business endeavours, and threatened suicide and homicide (Case 11); mental impairment (Case 12); mania, delusions, threatened violence, suspiciousness, poor memory, elation followed by depression, and eventual successful treatment in an asylum (Case 13); moral damage, lack of hygiene, deceitfulness, and strange, motiveless behaviour (Case 14); constant excitement, financial ruin, and attempted suicide (Case 15); delusions of persecution (Case 16); and parched lips, yellow skin, constant unrest, insane jealousy, and paranoid delusions (Case 17).

179 Mayer, E.
THE TOXIC EFFECTS FOLLOWING THE USE OF LOCAL ANESTHETICS.
Journal of the American Medical Association 82(11): 876-885, 1924.

E. - clin. pap. - case rep. - human - male - female - child - adolesc. - adult - acute - s.c. - dose/resp. - inject. - therap. admin. - top. admin. - anesth. - toxicity - treatm. - epilepsy - reac. time - coma - resp. depr. - fainting - convuls. - pain - heart - card.

arrhyth. - card. arrest - hemorrhage - pulse - respir. - pallor - sex - thyroid - epineph. - liver - pancr. - mydr. - organ wt. - death - autops. - age - body temp. - coc. mud - procaine - alypin - apothesin - butyn - dr. int. butyn - morph. - dr. int. procaine - stovain - caffeine

The author chaired a committee designed to report on 43 unpublished cases of death due to local anesthetic. The committee suggests that such cases are not as rare as is commonly believed. When death occurred definitely as a result of anesthetic, it was characteristically quick, marked by convulsions and respiratory arrest. Of all drugs listed, cocaine (sometimes with epinephrine) caused the greatest number of deaths (26). It was used in the form of a paste to induce anesthesia and abolish reflexes. Twenty-four cases were male and 16, female (three of the 43 total were not considered anesthetic-related). The youngest patient was three years old, and the oldest, 70. In at least 12 instances, cocaine was applied in concentrations considered unsafe by the committee. Cocaine solutions can be administered topically, sprayed, or injected s.c. Large doses of cocaine and epinephrine have a synergistic effect which can be fatal, particularly if injected. In a list of recommendations, the committee condemns s.c. injection of cocaine; preoperative use of cocaine mud; and injection of any anesthetic into the urethra when there has been a trauma. Amounts are suggested for safe doses in mouth, nose, and eye. The importance of accurate measurement of dose and sterile solutions is stressed, and all doctors are urged to report any toxic reactions or fatalities which may come under their observation. Brief summaries of the 43 cases are given, noting such reactions to cocaine as: difficult respiration; lack of pulse; cardiac arrest; coma; convulsions; shock; cyanosis; fainting; respiratory failure; mydriasis; increased body temperature; fluttering heart; and violent cough.

180 McIntyre, A.R.
RENAL EXCRETION OF COCAIN [sic] IN A CASE OF ACUTE COCAIN [sic] POISONING.
Journal of Pharmacology and Experimental Therapeutics
57: 133, 1936.

E. - abst. - human - frog - mouse - female - adult - acute - dose/resp. - i.v. - inject. - accident. admin. - toxicity - treatm. - brain - heart - blood - liver - kidney - urine - death - autops.

Accidental injection of 800 mg cocaine into the tonsillar area caused acute poisoning in a woman. Treatment with sodium amytal, sodium chloride solution and glucose allowed her to survive for 12 hr. A little more than half the dose of cocaine (429 mg) was excreted in the urine. In conclusion, much of a large quantity of cocaine can be expected to be eliminated by the kidney.

181 McKinney, H.E. and Benowitz, N.L.
MEDICAL COMPLICATIONS OF COCAINE USE.
Veterinary and Human Toxicology 25(4): 285, 1983.

E. - abst. - human - toxicity - epidem. - seizure - psychiat. - cardiovasc. - death - USA

The authors studied 2,250 cases of cocaine-related toxicity, noting such factors as route of administration, duration of adverse reactions, and type of seizures, cardiovascular problems and psychiatric sequelae. Death from cocaine was usually sudden enough that a patient could be considered lucky if he arrived at Emergency alive. The media reported increases in cocaine-related morbidity and mortality in 1982, yet knowledge of the pharmacology of the drug is still scarce.

182 McLaughlin, G.T.
COCAINE: THE HISTORY AND REGULATION OF A DANGEROUS DRUG.
In: Wales, H.W. (ed.), Drug Abuse Law Review - 1972-73. New York: Clark Boardman Company, Ltd., 254-290, 1974.

E. - rev. - human - user - acute - chronic - inhal. - oral - i.v. inject. - dose/resp. - intranasal - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - o.d. - price - CNS - resp. depr. - convuls. - depression - stim. - time percep. - anxiety - paranoia - euphoria - aggress. behav. - sleep - crim. behav. - mult. drug use - delusions - halluc. - pulse - bl. press. - anemia - respir. - sex. behav. - nausea - thirst - mydr. - tolerance - dependence - physical dep. - psych. dep. - addiction - death - body temp. - USA - S. Am. - coca leaf - Erythrox. coca - dr. comp. heroin

The rise in the popularity of cocaine was noticed in 1970 in the USA where, for the first time, the amount of cocaine confiscated was greater than the amount of heroin. Oddly, the literature on drug abuse contains relatively little information on this dangerous CNS stimulant. Cocaine is derived from the leaves of the plant Erythroxylon coca, which are chewed by South Americans for sustenance and refreshment. This practice is not considered physically addicting, but is associated with illiteracy and malnutrition. The alkaloid cocaine, which is extracted from the leaves by a chemical process, was first isolated in 1859 and used as a local anesthetic. Soon it was also used as a cure for morphine addiction and depression. Intellectuals like Sigmund Freud enjoyed the exhilarating mental effects and lasting euphoria. Until 1906, cocaine was present in many soft drinks and tonics. However, around that time people began to recognize that this drug was not harmless; if not addictive physically, it certainly did produce psychological dependence and could be toxic. The author discusses in detail the chain of interactions involved in the illegal distribution of cocaine, from its production in South America to its delivery to street pushers and users in the USA. Although price fluctuates, illicit cocaine is always expensive; for example, one kilogram of pure drug in New York City costs about $20,000 wholesale. By the time it has been adulterated and divided up into smaller amounts, this same kilogram may have risen in value to $125,000. Sniffing through the nostrils ("snorting") and i.v. injection are the two commonest means of intake. Mixed with heroin, cocaine's stimulant effects are subdued; this method is called "speedballing." The effects of cocaine are a combination of good and bad, depending on frequency of use, dose, etc. Well-documented reactions include euphoria, rapid pulse and respiration, elevated body temperature and blood pressure; constricted blood vessels and dilated pupils. Restlessness, talkativeness, physical stamina and sexual arousal are also reported. There is freedom from hunger, thirst and fatigue. After 30 min or so of this type of excitement, a depression may set in until drug use is repeated. Long-term intake can lead to hallucinations, paranoia, violence, indigestion, nausea, insomnia, anemia, and convulsions. Because users crave repetition of the cocaine high, the drug is described as producing psychological dependence. However, it does not cause tolerance or physical dependence. Overdose can be fatal once respiratory depression has occurred, yet reports of fatality are scarce. Populations of users consist largely of methadone-maintenance patients, artists, students and professionals. The author concludes with a call for more research and a discussion of federal and state cocaine regulation.

183 M'Donald, D.H.
CONCERNING COCA.
Therapeutic Gazette 1(8): 244, 1880.

E. - lett. - human - heavy user - chronic - oral - therap. use - toxicity - psychomot. - motiv. - lethargy - person. dis. - pallor - jaundice - eye - S. Am. - coca leaf

Although coca can be beneficial in the hands of a responsible physician, its indiscriminate use leads to the hopelessly lost condition of the "coquero" or confirmed chewer. Such an individual is recognized by his staggering gait, yellow skin, dim and tired eyes, quivering lips and apathetic attitude. Warnings should be issued about the dangers of long-term coca chewing.

184 Michelson, J.B., Whitcher, J.P., Wilson, S. and O'Connor, G.R.
POSSIBLE FOREIGN BODY GRANULOMA OF THE RETINA ASSOCIATED WITH INTRAVENOUS COCAINE ADDICTION.
American Journal of Ophthalmology 87(3): 278-280, 1979.

E. - case rep. - clin. pap. - human - male - adult - bacteria - user - acute - chronic - i.v. - inject. - toxicity - histology - eye - vis. acuity - heroin - amph.

Intravenous injection of such drugs as methylphenidate, heroin, and cocaine is associated with retinopathy, a noninflammatory degenerative disease of the retina. Users often experience "talc" or light flashes seconds after injection, caused by the powder filler of street drugs. The heart valves, lungs, liver and other organs of chronic i.v. abusers show evidence of foreign body granuloma when examined histologically. A case report is given in which a 27-year-old male heroin and LSD abuser saw light flashes right after an i.v. injection of cocaine. Upon examination, a single, organized retinal granuloma was seen, apparently embedded in the retinal tissue. Showers of emboli which can cause secondary pulmonary hypertension are a hazard of i.v. drug abuse, and can prove fatal. Other similar hazards are crystalline retinopathy and fungal endophthalmitis.

185 Miller, S.H.
COCAINE TOXICITY.
Journal of the American Medical Association 239(23): 2446, 1978.

E. - lett. ed. - human - dose/resp. - top. admin. - therap. admin. - anesth. - toxicity - CNS - blood - respir. - lungs - nose

The author remarks that cocaine is a dangerous drug as well as an excellent topical anesthetic, whose absorption and toxicity are not completely understood. Neither fatal dose nor biological half-life can be stated without qualification. In all surgical procedures, the minimum amount of anesthetic should be used to achieve the desired goal. A study of nine rhinoplasty patients revealed that a 5% cocaine solution (considered a low dose) for two minutes could produce a reaction and high serum levels.

186 Millman, R.B.
ADVERSE EFFECTS OF COCAINE.
Hospital and Community Psychiatry 33(10): 804, 1982.

E. - lett. - gen. disc. - human - user - acute - chronic - inhal. - intranasal - i.v. inject. - dose/resp. - toxicity - o.d. - resp. depr. - depression - psychol. - psychiat. - anxiety - paranoia - sleep - irritability - orientation - schizophrenia - psychosis - aud. halluc. - vis. halluc. - tact. halluc. cardiovasc. - lungs - hepatitis - nose - death - emaciation - free-base

Negative effects of cocaine vary depending on route of administration, dose and user's personality. Intravenous injection is hazardous if attended by nonsterile conditions and can lead to abscess, hepatitis and endocarditis (inflammation of lining of the heart). Overdose is recognized by respiratory collapse, and lethal dose is estimated at one to two grams. Fatalities, however, are rare. Sniffing (intranasal inhalation) can cause sinusitis and perforation of the nasal septum. Debilitation, susceptibility to infection, insomnia and poor nutrition are associated with chronic use. Psychological reactions include irritability, anxiety, depression, paranoia and compulsiveness. Heavy, frequent users suffer from cocaine psychosis which resembles acute paranoid schizophrenia and is marked by auditory, visual and tactile hallucinations. Psychiatric complications usually subside within several days after cessation of use. They often result from "free-basing" (i.e., smoking an alkaline extraction of cocaine which is rapidly absorbed by the lungs).

187 Monge, C.
THE NEED FOR STUDYING THE PROBLEM OF COCA-LEAF CHEWING.
Bulletin on Narcotics 4(4): 13-15, 1952.

E. - gen. disc. - human - male - female - user - chronic - self-admin. - oral - dose/resp. - anorexia - habit - withdrawal - craving - addiction - S. Am. - Peru - coca leaf

The author complains that his thoughts have been misrepresented by some who suggest that he has called coca-leaf chewing indispensable to the Andean, although other races do not need it. He insists that he is open to all points of view with regard to this habit and its consequences, provided that they are based on an honest assessment of facts. Coca chewing is harmless, does not produce craving, and can be discontinued without suffering. Yet controversy exists concerning whether or not it constitutes an addiction. High latitude living makes the Andean "a climato-physiological variety of the human race" whose pharmacological reactions are not always like those of sea-level dwellers. In conclusion, more scientific, economic and social investigation is needed on this topic.

188 Murphree, H.B.
COCAINE PAPERS: SIGMUND FREUD (NOTES ON THE FREUD PAPERS BY ANNA FREUD).
Contemporary Psychology 21(10): 713, 1976.

E. - bk. rev. - human - therap. use - anesth. - law - hist. of coc. - depression - dependence - spine - Coca-Cola - morph.

The author reviews the book Cocaine Papers: Sigmund Freud (Notes on the Freud Papers by Anna Freud) by R. Byck (ed.), New York: New American Library, 1974. The book is named in a misleading fashion, since Freud's writings constitute only about one-quarter of the contents. Freud looked upon cocaine as an antidepressant and a cure for morphine dependence. On both accounts, research and experience were to prove him mistaken: cocaine was found to be worthless as an antidepressant in experiments conducted 90 yr after Freud's time, and potentially disastrous as a cure for morphine addiction within Freud's lifetime. Freud designed a fairly sophisticated experiment to discover the effects of cocaine on energy, based on systematic study of grip strength. In general, this book contains many redundancies plus a glaring omission of W.S. Halstead who developed the use of cocaine as an anesthetic.

189 Murphy, H.B.M., Rios, O. and Negrete, J.C.
THE EFFECTS OF ABSTINENCE AND OF RE-TRAINING ON THE CHEWER OF COCA-LEAF.
Bulletin on Narcotics 21(2): 41-47, 1969.

E. - exp. pap. - human - adult - user - acute - chronic - oral - dose/resp. - toxicity - learning - brain - memory - concentration - sleep - irritability - interper. rel. - psychol. - pain - hunger - appetite - muscle - vision - urinalysis - habit - withdrawal - age - S. Am. - Argentina - coca leaf - ethanol - nicotine

The authors set out to test the hypothesis that chronic coca-chewing can lead to brain damage. The question is considered important relative to the future of Andean Indians who may need to learn new skills before their present state of economic misery can be improved. Thirty Argentinian field labours matched for age, literacy and place of birth were chosen as subjects. The chewers had used coca leaf for at least 10 yr with an average daily dose of 30 g or more. Controls had chewed only occasionally, if it all. As expected, controls initially performed better on test batteries and all subjects improved with practice. Users did not catch up with controls in learning efficiency. On manual tests, users almost always performed better than abstainers, but this was not the case for memory tests. Coca had no discernible influence on social interaction, sleep, or appetite. The finding that chewers scored lower than controls on tests of intellectual performance suggests that they do suffer from some form of brain damage, especially as this finding held regardless of age and literacy. It remains to be discovered how serious this brain damage could be in real-life situations. Generally, it seemed to be related to the ability to think in abstract terms. There is not much point in trying to eradicate the habit of coca-leaf chewing from the Andean population, even if it is undesirable, until social conditions are improved.

190 Myers, J.A. and Earnest, M.P.
GENERALIZED SEIZURES AND COCAINE ABUSE.
Neurology 34(5): 675-676, 1984.

E. - case rep. - human - animal - male - female - adult - user - i.v. inject. - i.p. - inhal. - intranasal - oral - dose/resp. - toxicity - seizure - epilepsy - resp. depr. - vertigo - convuls. - psychomot. - euphoria - confusion - orientation - card. arrest - incontinence - urine - hypertherm. - death - age - USA - dr. comp. amph. - alcohol - cannabis

Three brief case reports are given, possibly suggesting a causal relationship between i.v. injection of cocaine and generalized convulsions. In the first case, a 22-year-old woman experienced seizures after injecting 140 mg cocaine. In the second, a 20-year-old man presented with incontinence of urine after a three-minute seizure following about 160 mg i.v. cocaine. The third case, a 25-year-old man who had been abusing cocaine for 8 mo, experienced vertigo and convulsions after injecting about 140 mg. In all cases, seizures had never been experienced before, nor was there any family history of the problem. After a short discussion of adverse effects of cocaine, including cardiorespiratory arrest, hyperthermia and death, the author predicts a rise in the incidence of convulsions following i.v. cocaine abuse.

191 Nail, R.L., Gunderson, E.K.E. and Kolb, D.
MOTIVES FOR DRUG USE AMONG LIGHT AND HEAVY USERS.
Journal of Nervous and Mental Disease 159(2): 131-136, 1974.

E. - survey - human - male - adult - user - White - lt. user - heavy user - self-admin. - therap. admin. - psychiat. - motiv. - depression - sex - sex. behav. - interper. rel. - cannabis - opiates - hallucinogens - amph. - barb. - Vietnam

Interviews and questionnaires were given to 997 Navy men on the subject of their use of six illicit drugs - cannabis, opiates, hallucinogens, amphetamines, barbiturates and cocaine. Most of the cocaine users reported only occasional use (303 Ss versus 75 heavy users). Reasons given for use were mainly hedonistic (as opposed to therapeutic) and included fun (18 Ss), curiosity (36 Ss) and for enhancement of sexual pleasure (147 Ss). Sixteen heavy users took cocaine to have a closer relationship with someone, and the authors classify this as therapeutic use. The large percentage of Ss using cocaine for pleasure contrasted with the very few hedonistic reasons given by the amphetamine users in this sample (28 Ss versus 329 Ss with therapeutic motives).

192 Nakamura, G.R. and Noguchi, T.T.
FATALITIES FROM COCAINE OVERDOSES IN LOS ANGELES COUNTY.
Clinical Toxicology 18(8): 895-905, 1981.

E. - case rep. - clin. pap. - human - male - female - adult - user - Black - White - inhal. - oral - inject. - dose/resp. - toxicity - side-effect - o.d. - reac. time - seizure - euphoria - motiv. - crim. behav. - card. arrest - blood - hemorrhage - respir. - lungs - pulm. ed. - USA - heroin - lidocaine - caffeine - methaqualone - morph. - ethanol

In Los Angeles County, there was a 35% increase in the number of arrests due to illicit cocaine use from 1977 to 1978. Information is available to the general public in the form of handbooks and novels on ways of concealing and smuggling the drug. Out of 27 cocaine-related deaths by overdose reported from 1976 to mid-1979, 18 were due to cocaine alone. Seven case examples are given and blood concentration levels are tabulated for the 27 deaths. Autopsy findings in the seven case reports include acute pulmonary edema (i.e., fluid-filled lungs); vascular congestion; needle marks; condoms in intestinal tract; hemorrhage; and congested visceral organs; both males and females are mentioned, ranging in age from 30 to 40 yr. The table shows injection to be the most common route of administration in the fatal cases, and the typical victim to be a 27-year-old Caucasian male businessman, professional, blue-collar worker, or unemployed. There was little evidence of the stereotyped well-to-do cocaine abuser. In deaths caused solely by cocaine, blood levels ranged from 0.08 to 0.80 mg/dL. Death was rapid. Heroin was combined with cocaine in 30% of cases, presumably out of a desire to maximize cocaine's pleasurable effects and to minimize its adverse effects. In conclusion, as might have been predicted, cocaine-related deaths have increased along with recreational use of the drug.

193 Nanji, A.A. and Filipenko, J.D.
ASYSTOLE AND VENTRICULAR FIBRILLATION ASSOCIATED WITH COCAINE INTOXICATION.
Chest 85(1): 132-133, 1984.

E. - case rep. - clin. pap. - human - female - adult - user - acute - dose.resp. - oral - i.v. - toxicity - anesth. - treatm. - o.d. - CNS - neurol. - epilepsy - reac. time - coma - resp. depr. - cereb. ed. - heart - heart rate - blood - blood press. - card. arrhyth. - card. arrest - EKG - epineph. - mydr. - hypertherm. - death - autops. - *Erythrox. coca* - dr. tr. atropine - dr. tr. sodium bicarbonate - salicylate - ethanol - barb. - acetominophen - dr. tr. sodium nitroprusside

Small doses of cocaine, the alkaloid from the plant *Erythroxylon coca*, cause an increase in heart rate and blood pressure. High doses can be directly toxic to the heart. A case report is given of a 23-year-old woman who was found unconscious next to an empty syringe and spoon of cocaine. In the intensive care unit, she remained comatose but her blood pressure stabilized and her heart rate decreased to 100/min. Large amounts of cocaine were detected in the urine. The blood pressure rose again dramatically while the neurological condition deteriorated rapidly. A CT scan revealed evidence of cerebral edema. She died 48 hr after admission with dilated, fixed pupils. The absence of hyperthermia was noteworthy, as lethal doses of cocaine usually cause it to occur. Physicians should be mindful of the possibility of cocaine intoxication in cases of cardiac arrest or ventricular arrhythmias.

194 Negrete, J.C. and Murphy, H.B.M.
PHYSIOLOGICAL DEFICIT IN CHEWERS OF COCA LEAF.
Bulletin on Narcotics 19(4): 11-18, 1967.

E. - gen. disc. - exp. pap. - human - male - adult - user - chronic - acute - oral - dose/resp. - toxicity - epidem. - law - epilepsy - brain - depression - stim. - cognit. - psychol. - concent. - memory - psychiat. - euphoria - motiv. - lethargy - delusions - psychosis - blood press. - pulse - diabetes - bl. glucose - musc. - habit - body wt. - body temp. - S. Am. - Bolivia - Argentina - Peru - *Erythrox. coca* - coca leaf - ethanol

Several million Andeans of South America chew the leaves of the plant, Erythroxylon coca. It has long been suspected that this habit is responsible for chronic brain damage, partly because of the dull, apathetic manner of chewers. Delusional psychosis and epilepsy have been blamed on this practice, but without proof. Thirty or 40 g of leaf may be chewed everyday, yielding a cocaine content of 250 to 350 mg or about 5 mg/kg body weight. It is odd that most coca users appear to be depressed rather than stimulated, though with larger doses (50-80 g) they will exhibit higher temperature, pulse, blood pressure, blood-sugar and muscle strength. The authors studied 92 subjects (50 chewers, 42 controls) to look for evidence of brain damage caused by the coca habit. All subjects were male, aged 25-49 yr, Argentinian or Bolivian field labourers free from psychiatric disorder. The test battery administered included measurement of verbal intelligence; auditory memory; visual memory; figure-completion aptitude; similarity recognition; attention; manual ability; and block design skill. Careful analysis of the results indicated a definite psychological deficit among chronic coca chewers, even making allowances for such influences as age, literacy, and diet. There was no doubt that they performed more poorly than controls. Possible interpretation of these results is discussed and the question is raised as to whether or not the impairment would be reversible, given appropriate social opportunities and retraining.

195 Negrete, J.C.
COCA LEAF CHEWING; A PUBLIC HEALTH ASSESSMENT.
British Journal of Addiction 73(3): 283-290, 1978.

E. - rev. - human - male - female - daily user - acute - chronic - oral - dose/resp. - toxicity - brain - behav. - cognit. - psychol. - motiv. - delusions - psychosis - halluc. - anemia - thirst - hunger - tolerance - habit - craving - addiction - body wt. - age - emaciation - S. Am. - Bolivia - Peru - Argentina - Ecuador - Colombia - Erythrox. coca - coca leaf - hydrochloride - dr. comp. coffee - dr. comp. tobacco

About four million South Americans chew coca leaves, but the habit is most pronounced among the Quechua peoples who are socioeconomically backward. All ages of men and women chew, often daily, though the heaviest consumption is found among older males. There is a correlation between higher education and movement to urban areas with abandonment of the habit. Controversy about government efforts to eradicate the practice often centres on the question of whether or not chewing coca leaves is a help in dealing with high-altitude stress. It is generally agreed that motivation for chewing differs from that for recreational use of cocaine hydrochloride. Chewers are seeking relief from fatigue, hunger and thirst rather than pleasurable sensations. Chewers do not experience craving, nor do they exhibit the behavioural and psychological reactions exhibited by recreational consumers of cocaine. Long-term chewing is associated with a poor nutritional state as well as enlargement of the liver. However, poverty, unbalanced diet, alcohol abuse and parasitic disease may be responsible at least in part for these deficits. Psychologically, in a few cases, coca chewing may be linked to such problems as epilepsy and psychosis with hallucinations and delusions. Tests have indicated some change in brain function after chronic chewing, manifested mainly by cognitive deficit. The implications of this finding are outlined.

196 Olivares, G.J., Gupta, R.C., Lundberg, G.D. and Montgomery, S.H.
STREET COCAINE 1971-1975: NATURE, COST & EFFECTS.
Veterinary and Human Toxicology 19(3): 169-172, 1977.

E. - clin. pap. - human - adult - user - inhal. - oral - i.v. - dose/resp. - toxicity - anesth. - therap. use - chem. - law - hist. of coc. - o.d. - price - CNS - hyperref. - resp. depr. - neurotrans. - convuls. - halluc. - vertigo - stim. - subj. change - mult. drug use - anxiety - euphoria - cardiovasc. - tachycard. - blood press. - hypertens. - card. arrest - pulse - hyperact. - respir. - epineph. - nausea - sweating - diarrh. - urine - musc. - lacrimation - nose - death - procaine - lidocaine - amph. - Erythrox. coca - benzocaine - tetracaine - pipericaine - aspirin - PCP - caffeine - codeine - quinine - LSD - heroin - barb. - potassium nitrate - cannabis - Peru - Bolivia - Mexico - West Indies - Java - USA

A study was made of 270 street samples of cocaine or alleged cocaine, from 1971-1975, in relation to drug representation, geography, price, chronology, adulterants, amounts and reactions. Adulterants appeared in 50% of cases, and in 26 of these cases the adulterant was all there was (i.e., no cocaine). Other drugs frequently used as filler were procaine, lidocaine and amphetamine. In 81 cases it was determined that an average hit was about 29.2 mg. Reactions to cocaine-only included: numbness, chills, weird tastes, stiff muscles and fast pulse (mild); tight throat, numb teeth, speediness and, again, fast pulse (strong); and nose burns, nausea, headache, diarrhea, and cramps (bad). Street price ranged from $25 to $100/g, having little relation to quality. This means that one hit (29 mg) cost about $2 to $3. The vast majority snorted to experience a "smooth euphoric high," rather than for any therapeutic motive such as better work performance. In the 270 samples, there was no instance of death or overdose and only one case involving hospitalization. When fatality does occur, it is usually as a result of cardiac or respiratory arrest. Signs of toxicity include restlessness, anxiety, confusion, delirium, hyperreflexia, convulsions, tachycardia and hypertension - all stemming from CNS over-stimulation. The characteristic cocaine user is a sophisticated, intelligent, extroverted, middle-aged adult.

197 Olson, K., Benowitz, N.L. and Pentil, P.
MANAGEMENT OF COCAINE POISONING.
Annals of Emergency Medicine 12(10): 655-656, 1983.

E. - lett. ed. - clin. pap. - human - animal - treatm. - i.v. inject. - toxicity - o.d. - symp. NS - brain - seizures - convuls. - heart rate - tachycard. - card. arrhyth. - hypertens. - blood press. - pulm. ed. - urine - kidney - liver - musc. - hypertherm. - dr. tr. propan. - dr. tr. diaz.

The authors believe that propanolol can be effective in treating tachyarrhythmias (rapid, irregular heartbeat) following cocaine overdose, but that it is not necessarily the antidote for other cocaine-related problems. In fact, propanolol would be contraindicated in a patient suffering from hypertension and probably useless for such toxic reactions as hyerthermia and convulsions. Acidification of urine to increase the rate of excretion could be hazardous in patients with muscular hyperactivity. Therefore, no single method of treating cocaine overdose can be recommended for all cases.

198 Palmer, E.R.
THE OPIUM HABIT - A POSSIBLE ANTIDOTE.
Therapeutic Gazette 1(6): 163-164, 1880.

E. - clin. pap. - gen. disc. - human - male - adult - acute - chronic - oral - dose/resp. - therap. admin. - treatm. - hist. of coc. - CNS - depression - stim. - euphoria - affect - nausea - cardiovasc. - heart - appetite - eye - habit - phys. det. - USA - S. Am. - Bolivia - Peru - opium - ethanol - morph. - Erythrox. coca - coca leaf - tobac.

The author reports on his discovery of a possible cure for the pernicious habit of opium taking. On a bottle label, he had read that fluid extract of coca has a stimulating effect, reduces the need for food, excites the circulatory and nervous systems, gives vigour to muscles and intellect, and produces a sense of well-being with no ensuing depression. Therefore, he prescribed it to two patients suffering from cardiac troubles, with very good results in both cases. He then prescribed it for an opium eater who was in a "sorry plight," again with totally positive results. The patient became cheerful and broke off the opium habit, using the coca extract in a "good big dose" whenever depression threatened. Another opium eater also responded well to coca treatment. The author wishes to point out this remedy to other physicians who may also find it a "great antidote to the blues."

199 Pearman, K.
COCAINE: A REVIEW.
Journal of Laryngology and Otology 93(12): 1191-1199, 1979.

E. - rev. - human - dog - rabbit - user - acute - chronic - inhal. - oral - s.c. - i.v. - dose/resp. - inject. - therap. admin. - top. admin. - intranasal - anesth. - toxicity - treatm. - chem. - o.d. - price - CNS - hyperref. - tremor - seizure - reac. time - coma - resp. depr. - brain - vertigo - symp. NS - convuls. - depression - stim. - speech - psychomot. - pain - anxiety - paranoia - euphoria - aggress. behav. - subj. change - mult. drug use - halluc. - vis. halluc. - tact. halluc. - cardiovasc. - heart rate - tachycard. - blood - blood press. - card. dysrhyth. - pulse - respir. - sex. behav. - aphrodisiac - nausea - urine - liver - vomiting - hunger - intest. - musc. - ear - nose - eye - tongue - mydr. - withdrawal - addiction - wt. loss - fever - death - body temp. - S. Am. - Peru - Bolivia - Germany - coca paste - coca leaf - coc. mud - Erythrox. coca - coc. crystals - hydrochloride - heroin - dr. tr. diaz. - dr. tr. barb. - dr. tr. propan. - dr. int. adrenaline - dr. comp. opiates

Coca leaves from the shrub Erythroxylon coca contain the alkaloid cocaine which is both a local anesthetic and a CNS stimulant. Andean Indians have chewed the leaves for centuries as an aid to overcoming cold, hunger and fatigue. Symptoms of CNS excitation include euphoria, talkativeness, tremors and convulsions. Increased respiration (rapid but shallow), vasoconstriction, vomiting and respiratory depression may occur, ending in death. Sympathetic overactivity caused by overdose can cause tachycardia and mydriasis. Therapeutic doses of 150 mg have been known to result in cardiac dysrhythmias, increased pulse and blood pressure, and collapse due to cardiac arrest. Increased body temperature may accompany a diminished sense of fatigue. Oddly, peak blood levels after nasal administration occur within 15 to 60 min and yet recreational users report experiencing the high within three to five minutes and repeat doses frequently to maintain the effect. Topical application is usually considered safer than the s.c. or i.v. route, but systemic absorption does occur especially from the tracheobronchial tree. Fatality has been associated with illicit cocaine swallowed for smuggling purposes. The maximum safe dose has been estimated at 100 mg and at 200-300 mg, although larger amounts have been given with few side-effects. On the other hand, as little as 10 mg has been known to produce toxic reaction. Sniffing and i.v. injection are the preferred routes of administration among abusers who may experience paranoia, anxiety, formication and hallucinations with chronic use. The depression which sometimes follows abstinence is not considered a true withdrawal syndrome. Chronic abuse can also lead to various irritations of the nose, eye, ear and larynx.

200 Peckham, G.F.
COCA ERYTHROXYLON.
Therapeutic Gazette 1(7): 189, 1880.

E. - case rep. - human - male - female - adult - child - oral - dose/resp. - therap. admin. - treatm. - reac. time - pain - sleep - constip. - thirst - dry mouth - appetite - sweating - lungs - wt. loss - wt. gain - fever - phys. det. - opium

Two case reports are given in which coca was prescribed successfully in serious illness. The first, a 60-year-old woman, had suffered from a very bad cough and other signs of tuberculosis for about 10 yr with ever-increasing suffering. The author gave her fluid extract of coca, hoping it might at least help her to sleep, and was surprised to observe that it did much more: not only did she begin to sleep, but also got rid of the cough and night sweats and regained her appetite. She gained 20 pounds and seemed quite well after seven months. The second case, a five-year-old boy, had high fever, thirst, constipation and swollen joints. Prescription of coca again resulted in a marvelous recovery after 10 days.

201 Pérez Alcalá, R.
THE COCA QUESTION IN BOLIVIA.
Bulletin on Narcotics 4(2): 10-15, 1952.

E. - gen. disc. - human - adult - male - female - user - daily user - chronic - self-admin. - oral - dose/resp. - toxicity - hist. of coc. - percep. - time percep. - space percep. - smell - thought disorder - confusion - halluc. - vis. halluc. - aud. halluc. - sex. behav. - thirst - hunger - habit - addiction - death - age eff. - S. Am. - Bolivia - coca leaf - hydrochloride

Coca production is economically beneficial to the inhabitants of Bolivia, but the habit of coca chewing can be very harmful to the individual. Coca addicts rely on the leaf to mitigate feelings of hunger and thirst but in the process they become social outcasts, repulsive to smell and to see. Cocaine debilitates the digestive organs, worsening the Indian's condition of malnourishment. Even the power of coca to keep the individual working hard, long hours is destructive ultimately; he pushes himself beyond reasonable expectations and dies an early death. The average daily intake has been reported at 50 to 100 g a day, increasing with age, and tending to be higher among men. Eventual absorption might amount to about 13 cg cocaine into the digestive system, a toxic dose considerably higher than that recommended for medicinal purposes (i.e., one to three centigrams). The economics of the coca trade are discussed in some detail. A study is cited in which the following adverse effects are noted: disturbed perception; visual and auditory hallucinations; thought disorder; confusion; autism; and sexual problems. The history of the coca plant is briefly summarized. In conclusion, coca chewing is an unhealthy habit which should be systematically discouraged among Bolivian workers.

202 Perry, D.C.
HEROIN AND COCAINE ADULTERATION
Clinical Toxicology 8(2): 239-243, 1975.

E. - gen. disc. - human - rat - rabbit - user - i.v. - inject. - top. admin. - i.m. - anesth. - toxicity - o.d. - price - neurol. - euphoria - resp. depr. - convuls. - CNS - vertigo - nausea - vomiting - diarrhea - stim. - pain - crim. behav. - mult. drug use - urinalysis - blood - hypotens. - eye - blindness - lungs - addiction - death - procaine - lidocaine - benzocaine - caffeine - amph. - heroin - quinine - phencyclidine - ethanol - barb. - Mexico - USA - Canada

Use of heroin and cocaine is widespread and so is the adulteration of both drugs by dealers seeking to enhance their profits. Adulterants are particularly dangerous when injected i.v., as they may become emboli and result in neurological damage. Substances used as filler include talc, flour, cornstarch, mannitol, procaine, amphetamine and caffeine. Analysis of street samples of cocaine show little correlation between purity and price. The uniqueness of cocaine consists in its dual role of analgesic and stimulant. Its toxicity can be manifested by convulsions, respiratory arrest and death, especially after i.v. injection which is common among some users. The danger of quinine as an adulterant of heroin is discussed.

203 Petersen, R.C.
COCAINE.
Statement on behalf of NIDA before the Select Committee on Narcotics Abuse and Control House of Representatives, p. 5, July 24, 1979.

E. - gen. disc. - human - animal - user - acute - chronic - inhal. - oral - i.v. inject. - dose/resp. - top. admin. - intranasal - anesth. - toxicity - therap. use - price - CNS - reac. time - depression - psychol. - paranoia - euphoria - suicide - sleep - crim. behav. - hyperact. - psychosis - blood press. - heart rate - withdrawal - addiction - body wt. - death - USA - coca paste - free-base - amph.

National surveys which depend on self-reporting of drug usage are often inaccurate, particularly in the case of a drug like cocaine because it can be highly adulterated without the user's realizing it. Thus, even in good faith, it is possible for a user to misrepresent the amount of cocaine he has consumed. Nevertheless such surveys are useful in indicating trends. Costing about $3,000/oz, cocaine is regarded as a status-laden and glamorous drug. Its use by all age groups is increasing, though because of its prohibitive cost regular use is still relatively uncommon in the USA. The acute effects of a moderate dose are feelings of exceptional well-being, confidence, and energy, which last for about an hour. Heart rate and blood pressure may increase by 30 to 50 per cent and 10 to 15 per cent, respectively. These changes resemble those associated with mild physical exertion and are not normally dangerous. Cocaine causes blood vessels to contract and acts as a local anesthetic when applied topically to mucous membranes. Heavy use can result in ulceration of the nasal mucous membrane, causing a characteristic running or stuffy nose. Users find it difficult to stop taking cocaine, despite the absence of physical withdrawal upon cessation of use. Long-term consumption is associated with such psychological phenomena as delusions of persecution, visual and tactile hallucinations, psychosis and depression. Experts generally agree that if the cost of the drug drops, use will increase and so will problems relating to heavier use. Death from cocaine abuse is rare, but has been reported from i.v., oral and intranasal administration. Free-basing or smoking a converted product of cocaine can lead to binge-use which is apparently hard to control. Free-basers exhibit hyperactivity, insomnia, weight loss and paranoia. The author discusses briefly the medical uses of cocaine, especially as an anesthetic, and recommends future research on its toxicity.

204 Post, R.M., Gillin, J.C., Wyatt, R.J. and Goodwin, F.K.
THE EFFECT OF ORALLY ADMINISTERED COCAINE ON SLEEP OF DEPRESSED PATIENTS.
Psychopharmacologia 37: 59-66, 1974.

E. - exp. pap. - human - adult - male - female - acute - exp. admin. - oral - dose/resp. - hist. of coc. - EEG - psychiat. - stim. - depression - affect - sleep - blood press. - pulse - respir. - sex - body temp. - age - coca leaf - dr. comp. amph.

A double-blind study was conducted on the sleep patterns of five depressed patients (three male, two female) aged 43-54 yr. Six clinical trials with EEG recordings showed a suppression of REM sleep and total sleep by cocaine. A detailed table outlines the effects of orally administered cocaine versus placebo on sleep. No significant changes in mood, pulse, temperature, blood pressure or respiration were noted. The higher the dose, the more REM sleep suppression occurred. This effect is similar to that of amphetamine.

205 Post, R.M., Kotin, J. and Goodwin, F.K.
THE EFFECTS OF COCAINE ON DEPRESSED PATIENTS.
American Journal of Psychiatry 131(5): 511-517, 1974.

E. - exp. pap. - clin. pap. - case rep. - human - animal - mouse - rat - male - female - acute - exp. admin. - oral - i.v. inject. - dose/resp. - therap. admin. - therap. use - treatm. - psychiatr. - neurol. - EEG - neurotrans. - depression - stim - anxiety - euphoria - dysphoria - speech - sleep - mania - psychosis - affect - body percep. - liver - kidney - blood press. - pulse - lacrimation - respir. - dependence - physical dep. - psych. dep. - tolerance - reverse tolerance - body temp. - coca leaf - dr. comp. amph.

The effectiveness of cocaine as an antidepressant was tested in 16 patients, male and female, who had been hospitalized for depression. Oral administration of 5 mg, 25 mg, 30 mg, or 100 mg did not produce consistent results on mood, i.e., one patient became more depressed whereas others showed no change or seemed to cheer up. Nor did the oral route cause consistent alterations of temperature, pulse, blood pressure and respiration. However, suppression of REM and total sleep was significant. By contrast, i.v. administration of 2.5 mg, 5 mg, 8 mg, or 25 mg caused noticeable changes in mood and vital signs. Psychological effects such as tearfulness correlated well with physiological effects such as increased blood pressure and pulse. Two case reports are given which illustrate unusual reactions. The first, a woman, reported feeling optimistic after 8 mg cocaine yet exhibited anxiety, tearfulness and agitation. The second, another woman, aged 28 yr, showed only a slight increase in pulse and blood pressure after infusion of 3 mg cocaine, yet reported a subjective experience of great euphoria. In the ensuing discussion, the authors conclude that cocaine cannot be classified as an unqualified antidepressant because of the variability of its effective dose range, its toxicity and its potential for psychological dependence.

206 Post, R.M.
COCAINE PSYCHOSES: A CONTINUUM MODEL.
American Journal of Psychiatry 132(3): 225-231, 1975.

E. - clin. pap. - human - animal - primate - user - acute - chronic - exp. admin - oral - s.c. - i.v. - i.m. - dose/resp. - par. inject. - therap. admin. - toxicity - chem. - resp. depr. - neurotrans. - convuls. - depression - speech - psychomot. - cognit. - concent. - psychiat. - anxiety - paranoia - euphoria - dysphoria - aggress. behav. - motiv. - irritability - sleep - hyperact. - delusions - affect - interper. rel. - orientation - schizophrenia - mania - psychosis - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - blood - blood press. - card. arrest - pulse - sex. behav. - epineph. - anorexia - skin - lacrimation - reverse tolerance - withdrawal - addiction - amph.

Contrary to usual pharmacological hypotheses, the author speculates that possibly more than one psychiatric illness can be associated with cocaine use. Records do show in fact that manic-like euphoria, depressive-like dysphoria and schizophrenic-like paranoid psychosis have all resulted from use of this drug, depending on administration variables such as dose and chronicity. Syndromes produced by cocaine are not identical to those of the functional psychoses, but do mirror them in many ways. Freud described cocaine euphoria after 50 to 100 mg as an exhilarating sense of vitality and self-control with no negative after-effects. Because the cocaine high is so intensely pleasurable, addicts will repeat administrations every 10 or 15 min in order not to lose it. Higher doses have been reported to cause talkativeness, hyperactivity, sleeplessness, unstable moods, violent behaviour, grandiose delusions and sexual excitation. Cocaine dysphoria, on the other hand, is manifested by anxiety, suspiciousness, lacrimation, high pulse and blood pressure, and sadness. Chronic use has been associated with apathy and melancholy (during periods of use as opposed to periods of abstinence). The paranoid psychosis resulting from long-term i.v. abuse is very similar to acute paranoid schizophrenia. It is sometimes referred to as "bull horrors" because of intense fear of police. In this condition, the user may experience auditory, visual or olfactory hallucinations as well as a peculiar feeling of insects beneath the skin (formication). The three reactions (euphoria, dysphoria and psychosis) are discussed in relation to such variables as dose, chronicity, route of administration, individual personality and genetics. Evidence has accumulated to suggest the occurrence of reverse tolerance, i.e., increased effect after several administrations of the same dose. Drug models of naturally occurring stress, biochemical correlates and animal models are discussed. The author concludes that reactions to cocaine may be usefully studied and compared to the endogenous psychoses.

207 Post, R.M. and Contel, N.R.
HUMAN AND ANIMAL STUDIES OF COCAINE: IMPLICATIONS FOR DEVELOPMENT OF BEHAVIORAL PATHOLOGY.
In: Creese, I. (ed.), Stimulants: Neurochemical, Behavioral, and Clinical Perspectives. New York: Raven Press, 169-203, 1983.

E. - book - rev. - human - animal - rat - cat - mouse - primate - dog - male - female - user - acute - chronic - exp. admin. - inhal. - oral - inject. - dose/resp. - intranasal - anesth. - toxicity - o.d. - CNS - resp. depr. - convuls. - behav. - depression - stim. - abnor. behav. - psychomot. - subj. change - psychiat. - paranoia - dysphoria - euphoria - aggress. behav. - sleep - hyperact. - prog. drug use - irritability - delusions - affect - confusion - schizophrenia - psychosis - halluc. - tact. halluc. - vis. halluc. - sex. diff. - sex. behav. - anorexia - tolerance - sensitization - death - age - coca paste - amph. - morph. - lidocaine - alcohol - LSD

A recreational drug with significant abuse potential, cocaine has become increasingly popular in recent times. Observations based on animal experiments and clinical data indicate that repeated administration results in noticeable behavioural adaptations. In general, these adaptations suggest tolerance (i.e., reduced effects from same dose), depending on the individual or population observed as well as the time lapse between administrations. Possible reactions to the stimulant effects of cocaine are summarized in table form. Under moderate effects are listed such phenomena as mood amplification, energy, alertness, sleep disturbance, hyperactivity, overtalkativeness, sexual arousal, anger, compulsiveness, anorexia and exaggerated self-confidence. Under severe effects these same phenomena are cited again, but noted as occurring to a higher degree or in a negative form (for example, hostility, total insomnia, total anorexia, etc.).

Experiments are discussed in which these reactions were observed. It is noted that dose and route of administration are important variables in determining drug effects. Generally, low doses are associated with positive effects and high doses, with negative ones. Overdose can lead to confusional psychosis, convulsions, cardiovascular and respiratory arrest, and death. Quotations from well-known persons like Malcolm X and Mantegazza are used to illustrate the euphoria which motivates a large percentage of use. There is some indication that oral and intranasal consumption may be less likely to result in adverse effects than consumption by inhalation (i.e., smoking coca paste). A detailed table is given outlining the motor responses and development of sensitization of various animal species to different doses. It appears that tolerance tends to occur when drug administrations are repeated in a relatively short period of time, whereas sensitization tends to occur when administrations are spaced further apart. Age and sex variables are discussed in relation to animal experiments, but caution is advised in interpreting human experiments which often employ addict volunteers as subjects. Cocaine-induced behavioural effects also depend somewhat on environmental conditions, according to experiments with rats and cats. Repeated stimulant administration is now being studied as a model for endogenous affective disorders.

208 Price, K.R.
FATAL COCAINE POISONING.
Journal of the Forensic Science Society 14(4): 329-333, 1974.

E. - case rep. - clin. pap. - human - rat - male - female - adult - child - user - acute - inhal. - oral - i.p. inject. - top. admin. - dose/resp. - toxicity - o.d. - psychomot. - crim. behav. - blood - spleen - stom. - liver - kidney - brain - urine - addiction - death - autops. - coc. hydrochloride - morph. - pethidine

The distribution of cocaine in the body after a fatal dose has not been studied in any detail. A case report is given of a male addict who died about four hours after eating two or three grams of cocaine hydrochloride. A table lists the levels of cocaine found in blood, urine, bile, kidney, liver, spleen and stomach. Presence of morphine and pethidine was also tested for, but neither was significant. The methods used for detection of cocaine could be applied to future fatalities. This case is significant because of the absence of other drugs which might complicate the effects of cocaine.

209 Rappolt, R.T., Gay, G., Inaba, D.S. and Rappolt, N.R.
PROPANOLOL IN COCAINE TOXICITY.
Lancet ii: 640-641, 1976.

The information in this letter has been reported elsewhere. For annotations see: Citations 210 and 211

210 Rappolt, R.T., Gay, G.R. and Inaba, D.S.
PROPANOLOL IN THE TREATMENT OF CARDIOPRESSOR EFFECTS OF COCAINE.
New England Journal of Medicine 295(8): 448, 1976.

E. - lett. ed. - human - user - acute - i.m. - i.v. - dose/resp. - therap. admin. - toxicity - treatm. - o.d. - tremor - reac. time - stim. - anxiety - paranoia - orientation - cardiovasc. - card. arrhyth. - tachycard. - respir. - hypertens. - hypertherm. - death - dr. tr. diaz. - dr. tr. propan.

The authors have observed and treated symptoms of cocaine toxicity such as hypertension and tachycardia in rock-concert participants. Often these patients are anxious, paranoid and disoriented. In addition to diazepam, i.v. administration of propanolol in doses up to 8 mg has proven safe and effective in reversing cardiopressor effects, thus preventing death.

211 Rappolt, R.T., Gay, G.R. and Inaba, D.S.
PROPANOLOL: A SPECIFIC ANTAGONIST TO COCAINE.
Clinical Toxicology 10(3): 265-271, 1977.

E. - case rep. - clin. pap. - human - male - female - adult - user - acute - chronic - exp. -admin. - inhal. - i.v. inject. - dose/resp. - toxicity - treatm. - o.d. - CNS - tremor - speech - euphoria - anxiety - mult. drug use - heart rate - tachycard. - blood press. - hypertens. - card. arrhyth. - card. arrest - pulse - respir. - asthma - vomiting - dry mouth - skin - sweating - mydr. - body temp. - dr. tr. propan. - ethanol - cannabis - tobac.

Five case reports are given of toxic reactions to cocaine successfully managed by administration of propanolol. The subjects' (four male, one female) ages ranged from 26 to 44 yr. In four of the five cases, 200 mg was administered experimentally but in the first case the amount consumed is not stated. Various reactions to cocaine included outbursts of speech, suspiciousness, pallor, nervousness, tremors, dilated pupils, vomiting, shallow respiration, elevated pulse and blood pressure, weak pulse, euphoria, talkativeness, cold hands and feet, dry mouth, headache, rapid eye movements, sweating, queasiness, teeth-grinding, intense colour perception, and nausea. Route of administration was either snorting or i.v. injection. Propanolol is recommended in the treatment of cocaine overdose as a safe, effective measure against the hypertension, tachycardia and tachypnea which put the victim at risk.

212 Ravin, J.G. and Ravin, L.C.
BLINDNESS DUE TO ILLICIT USE OF TOPICAL COCAINE.
Annals of Ophthalmology 11(6): 863-864, 1979.

E. - case rep. - clin. pap. - gen. disc. - human - female - adult - user - ocular admin. - inhal. - top. admin. - anesth. - toxicity - CNS - depression - stim. - pain - psychiat. - euphoria - suicide - crim. behav. - affect - sex. behav. - tongue - eye - IOP - vis. acuity - blindness - vision - dr. int. amph. - dr int. quinine

A case report of a 32-year-old healthy woman who presented with bilateral corneal ulcers demonstrates the danger of instillation of cocaine into the eye. The patient experienced severe ocular pain four months after the original infection. After a year, vision in the right eye was reduced to 20/300 because of more corneal scarring and the left eye was removed. The authors are unaware of any other report of ocular administration of cocaine for recreational purposes. Like all local anesthetics this drug has adverse effects on the cornea, particularly when adulterated with such irritants as quinine. It is possible that the patient in this case suffered eye damage more due to adulterants than to cocaine itself.

213 Resnick, R.B., Kestenbaum, R.S. and Schwartz, L.K.
ACUTE SYSTEMIC EFFECTS OF COCAINE IN MAN: A CONTROLLED STUDY OF INTRANASAL AND INTRAVENOUS ROUTES OF ADMINISTRATION.
In: Ellinwood, E.H., Jr. and Kilbey, M.M. (eds.), Cocaine and Other Stimulants. New York: Plenum Press, 615-628, 1977.

E. - exp. pap. - human - adult - user - *in vivo* - acute - chronic - exp. admin. - inhal. - i.v. - inject. - dose/resp. - intranasal - toxicity - interper. rel. - EKG - reac. time - musc. - subj. change - tachycard. - heart rate - blood press. - respir. - stom. - anorexia - body temp. - USA

Non-medical use of cocaine has increased significantly recently in the US. Yet no systematic study has been done on the magnitude and duration of its effects at different doses. Lethal dose has been stated as 1.2 g by some authors, and 30 mg by others. Severe toxic effects have occurred at doses as low as 20 mg. The authors set up an experiment designed to assess the physiologic and subjective effects of 10 mg and 25 mg cocaine over half an hour. Nineteen volunteers (sex unspecified) aged 21-42 yr with a history of regular cocaine use were monitored before and after drug administration. Intravenous administration was associated with significant effects at both doses, but intranasal administration produced effects only at 25 mg (minimal change in blood pressure and subjective high). Generally, subjective effects correlated well with physiologic measures (heart rate, blood pressure, respiration, oral temperature, and handgrip strength). Four subjects felt anxious and depressed within 20 to 30 min of the 25 mg i.v. dose. Tachycardia (rapid heart rate) was experienced as an unpleasant effect in one subject after 25 mg i.v. There was no indication of increased muscular strength in any subject. Anorexia (lack of appetite) was the longest-lasting reaction.

214 Ridpath, R.F.
THE UPPER RESPIRATORY PASSAGES IN HABITUAL USERS OF COCAIN [sic] AND HEROIN.
Laryngoscope 26: 53-56, 1916.

E. - clin. pap. - case rep. - human - male - female - user - chronic - inhal - intranasal - toxicity - law - price - vocaliz. - cognit. - crim. behav. - sleep - mult. drug use - anemia - rhinitis - teeth - nose - habit - emaciation - USA - coc. crystals - dr. comp. heroin - ethanol - tobac.

Just after the enforcement of the Harrison Act, the author conducted a study of the noses and throats of many "drug fiends" who ended up in a Philadelphia hospital. Different varieties of individuals were found in the sample: from the intellectual to the "semi-imbecilic," although all showed signs of poor character and criminal potential. Many smoked cigarettes, but few drank alcohol. One case report of an 18-year-old female heroin and cocaine user includes a note on her excessive talkativeness and dishonesty while under the influence of cocaine. She suffered from an abundant thin watery discharge from her nose. Many patients believed erroneously that cocaine, unlike heroin, was not addictive. Most were underweight, emaciated and anemic. The preferred route of administration for heroin and cocaine was intranasal, partly because it ensured little loss of these expensive drugs. Physical examination revealed several cases of the following conditions: red and swollen nostrils; irritated or atrophied (shrunken) mucous membrane; perforated nasal septum; chronic watery nasal discharge; irritable cough; anemic larynx; poor teeth; coated tongue; and granular, glazed, anemic, shrunken pharynx. Cocaine use in particular was associated with epistaxis (nosebleed).

215 Sawicka, E.H. and Trosser, A.
CEREBROSPINAL FLUID RHINORRHOEA AFTER COCAINE SNIFFING.
British Medical Journal 286(6376): 1476-1477, 1983.

E. - case rep. - human - male - adult - user - chronic - inhal. - intranasal - treatm. - anesth. - toxicity - smell - subj. change - nose - bone - body temp. - addiction - psych. dep. - coca leaf

A case report is given of a 34-year-old man who presented with profuse nasal discharge which had lasted for six days. He was a long-term cocaine user and had recently snorted some "high quality" drug. In addition to the clear, salty discharge, he suffered from uneasiness and anosmia (loss of the sense of smell). During surgery it was discovered that the olfactory nerves were inflamed and edematous (full of watery fluid). The authors are unaware of any other case of cocaine-induced cerebrospinal fluid rhinorrhoea, but this psychologically addictive drug has long been associated with related ailments such as inflammation and nasal septum perforation.

216 Schatzman, M., Sabbadini, A. and Forti, L.
COCA AND COCAINE: A BIBLIOGRAPHY.
Journal of Psychedelic Drugs 8(2): 95-128, 1976.

E. - rev. - human - animal - inhal. - oral - inject. - therap. use - anesth. - toxicity - hist. of coc. - law - depression - stim. - sleep - euphoria - psychol. - paranoia - crim. behav. - aggress. behav. - psychosis - nose - habit - dependence - physical dep. - psych. dep. - withdrawal - addiction - USA - S. Am. - Europe - coca leaf - Coca-Cola - opiates - marihuana

Difficulties in researching illicit drugs include getting government permission to obtain samples and establishing trust between researcher and user. Questionnaires are not totally reliable either, even if they are anonymous, because street users often do not know what dose they have taken. Animal experiments are not particularly enlightening about the psychological effects of a drug in humans. For centuries South American natives have chewed the leaves of the coca shrub from which cocaine is derived. The North American literature contains reports of past licit use of cocaine as a pleasurable stimulant and as an anesthetic. Today illegal recreational use is increasing markedly in Europe and North America, but little attention has been paid to the vast literature published between 1880 and 1940 often in languages other than English. The authors discuss the history of coca use among the Incas and Spaniards and the origins of cocaine use in Europe and North America. Several writers have expressed the opinion that chewing coca produces different effects from those following consumption of cocaine. Some consider coca to be milder than cocaine, but many government reports fail to make the distinction. The bibliography attached to this article is divided into two sections, Coca and Cocaine, and contains 27 pages of references some of which are annotated. The terms "narcotic", "drug", "addiction", "habituation", and "dependence" are discussed. The authors believe that those who inject will find it harder to stop using cocaine than those who employ other routes of administration, and that injection of high doses is most likely to produce dangerous effects like violence, paranoia and psychosis.

217 Schnoll, S.
COCAINE.
Journal of the American Medical Association 232(7): 706, 1975.

E. - lett. ed. - human - adult - user - inhal. - acute - intranasal - toxicity - treatm. - price - psychosis - nose - age - mult. drug use - USA - cannabis - hallucin.

In this letter to the editor, the author comments on the recent popularity of recreational cocaine use among middle-class professionals who would not normally be suspected of drug abuse. Acute psychotic reaction and nasal congestion are the most frequent complaints of this type of user. Cessation of cocaine consumption will allow the congestion to clear up within five to ten days.

218 Schultz, C.B.
STATUTORY CLASSIFICATION OF COCAINE AS A NARCOTIC: AN ILLOGICAL ANACHRONISM.
American Journal of Law and Medicine 9(2): 225-245, 1983.

E. - gen. disc. - human - user - Black - acute - chronic - anesth. - toxicity - hist. of coc. - law - CNS - stim. - percep. - anxiety - aggress. behav. - lethargy - crim. behav. - irritability - delusions - halluc. - withdrawal - craving - death - USA - Coca-Cola - dr. comp. opiates - dr. comp. amph. - dr. comp. ethanol - cannabis - barb.

Although the author discusses mainly the legal status of cocaine, he also makes a few statements about health effects. Since cocaine is a non-addictive stimulant it is illogical to classify it as a narcotic (a term generally referring to depressant addictive drugs). Cocaine alters perceptions, like narcotics, but otherwise has little in common with them. Derived from the coca plant (as opposed to the opium plant), it is both a CNS stimulant (like the amphetamines) and a local anesthetic. Use of cocaine was not rare in the late nineteenth century (for example, in tonics and beverages such as Coca-Cola), but there was little public concern about it. However, after 1900 scientists began to warn against it as a baneful menace which led to antisocial behaviour, especially among blacks. Modern investigation has indicated the most frequent negative effect of cocaine use to be irritability and lethargy upon withdrawal, with a desire for more drug. Acute anxiety, hallucinations and delusions have been reported, along with rare cases of severe toxicity and death. Craving can be a problem for habitual users. The opinion has been suggested that cocaine distracts people from healthier pursuits because of its ability to cause preoccupation. An enormous black market exists for cocaine trafficking. Nevertheless occasional users do not report many bad reactions, and other drugs like alcohol are more often associated with aggression. Scientific evidence does not support the view of cocaine as an extraordinarily dangerous drug. There follows a lengthy discussion of cocaine's proper legal classification.

219 Schultz, M.G.
THE "STRANGE CASE" OF ROBERT LOUIS STEVENSON.
Journal of the American Medical Association 216(1): 90-94, 1971.

E. - gen. disc. - human - male - adult - anesth. - therap. use - treatm. - hist. of coc. - stim. - euphoria - vis. halluc. - sleep - asthma - thirst - hunger - eye - S. Am. - coca leaf - opium - morph. - ethanol - ether - cannabis

The author gives a biographical sketch of the famous writer, Robert Louis Stevenson, suggesting the possibility that he may have written The Strange Case of Dr. Jekyll and Mr. Hyde while under the influence of cocaine. It is well known that Stevenson was extremely ill with tuberculosis at the time of writing this work, and yet he completed 60,000 words within six days. Historically cocaine, the active alkaloid of the coca plant, has been used to alleviate hunger, fatigue and sadness, and as a cure for such ailments as gonorrhea, seasickness and hay fever. Sigmund Freud wrote about its ability to cause euphoria, self-confidence, and mental and physical stamina without over-exhilaration. The transformation of Dr. Jekyll into Mr. Hyde is compared to descriptions of the transformation of the cocaine user into a debased and demoralised being with no will power.

220 Schwartz, K.A. and Cohen, J.A.
SUBARACHNOID HEMORRHAGE PRECIPITATED BY COCAINE SNORTING.
Archives of Neurology 41(7): 705, 1984.

E. - lett. ed. - case rep. - human - male - female - adult - user - inhal. - intranasal - toxicity - treatmt. - neurol. - orientation - confusion - vis. halluc. - blood press. - pulse - eye - head - neck - dr. tr. steroids

After snorting cocaine 12 times and consuming 120 mL alcohol, a 23-year-old woman experienced severe head, neck and eye pain. Medical examination revealed aneurysm which was treated on her 11th hospital day. This woman had used cocaine about six times per year for the past five years with no previous history of headaches. Two other cases are outlined briefly in which a link seemed to exist between cocaine use and neurological deficit. It is recommended that physicians be alert to this association in the future.

221 Schwartz, P.
"....INFORMATION ON USE OF COCAINE."
American Journal of Nursing 80(4): 644, 1980.

E. - lett. ed. - human - inhal. - intranasal - treatm. - mult. drug use - addiction - narcotics

A nurse expresses concern for the narcotic addicts she counsels who snort cocaine heavily without realizing that it is a dangerous drug.

222 Sedan, J.
ATROPHIE OPTIQUE ET IRIDOPLEGIE CHEZ UN COCAINOMANE [Optical Atrophy and Iridoplegia in a Cocaine Addict] (Fre.).
Marseille Médical 62: 366-370, 1925.

F. - case rep. - human - male - adult - heavy user - chronic - dose/resp. - toxicity - treatm. - CNS - psychomot. - vis. percep. - prog. drug use - eye - vis. acuity - mydr. - blindness - vision - addiction - abstinence - morph. - strychnine

The author presents the case report of a 27-year-old male pharmacist who began losing his eyesight after four years of progressively heavy cocaine use (from 0.5 to 5 g/day). An attempt by the patient to substitute morphine for cocaine had failed. He presumed cocaine to be the cause of his blindness, and was very eager to regain normal vision. Nothing abnormal was found relating to his nervous system apart from a slightly uneven gait. Examination of the eyes revealed lack of reflex to light, mydriasis (dilated pupils), poor visual acuity, and paralyzed accommodation. Absolute abstinence from cocaine resulted in marked improvement within four months.

223 Senay, E.C.
COCAINE: 1977. NIDA RESEARCH MONOGRAPH.
American Journal of Psychiatry 136(4): 471, 1979.

E. - bk. rev. - human - user - toxicity - therap. use - hist. of coc. - chem.

The author comments favourably on the multiauthored NIDA Research Monograph Cocaine: 1977. The monograph contains information on the history, chemistry and pharmacology of cocaine and its abuse potential is discussed in an objective, scientific manner.

224 Shulgin, A.T.
DRUGS OF ABUSE IN THE FUTURE.
Clinical Toxicology 8(4): 405-456, 1975.

E. - rev. - human - parenteral - anesth. - chem. - price - stim. - S. Am. - *Erythrox. coca* - procaine - methedrine - methyl alcohol - opiates - amph. - barb. - halluc.

A brief discussion on cocaine is contained in this paper otherwise devoted to such drugs as opiates, amphetamines, barbiturates and hallucinogens. As the title suggests, the author looks to future legal, economic and social changes which may affect trends in drug abuse. Cocaine is a well-known stimulant, recently enjoying a rise in popularity among illicit users. It is often diluted with procaine or methedrine, unbeknownst to the street purchaser. Although the drug normally comes from the South American plant *Erythroxylon coca*, lately chemists have taken an interest in producing it synthetically in the hope of reducing its notoriously high price. The author mentions briefly the chemical procedures which can be used to synthesize cocaine, and admits that little is known about the abuse potential of the resulting substitute products.

225 Siegel, R.K.
COCAINE: RECREATIONAL USE AND INTOXICATION.
In: Petersen, R.C. and Stillman, R.C. (eds.), Cocaine: 1977. Rockville, MD: Dept. of Health, Education, and Welfare, Public Health Service, 119-136, 1977.

E. - rev. - human - animal - male - female - user - oral - i.v. - i.m. - s.c. - inject. - intranasal - toxicity - hist. of coc. - price - CNS - stim. - sex - percep. -

smell - concent. - memory - euphoria - irritability - orientation - mania - psychosis - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - gust. halluc. - eye - appetite - hydrochloride - coca leaf - S. Am. - caffeine - alcohol - cannabis - LSD

There are several alkaloids in the coca plant, Erythroxylon coca, including cocaine. Historically, man may have begun his experimentation with this drug based on his observation of animals which ate coca leaves to sustain them when nothing else was available. It is now well-documented that cocaine's psychoactive properties pertain to animals as well as man. The main reason for recreational use today is the pursuit of psychological intoxication which consists of exhilaration, euphoria, feelings of self-control and mental power. Sexual stimulation and increased sociability are also regarded as desirable effects by most users. Negative consequences are usually associated with long-term consumption and have been described as nervousness, hallucinations, psychosis, addiction, delirium, mania, and disorientation. A discussion of 85 recreational users with details about their various hallucinations is almost identical to that published elsewhere. For annotation see: Siegel, R.K., Cocaine hallucinations. Am. J. Psychiatry 135(3): 309-314, 1978. In summary, the effects of cocaine are neither completely negative nor completely predictable; much about the drug is not yet known.

226 Siegel, R.K.
COCAINE HALLUCINATIONS.
American Journal of Psychiatry 135(3): 309-314, 1978.

E. - exp. pap. - rev. - human - adult - user - chronic - acute - inhal. - intransal - dose/resp. - hist. of coc. - dysphoria - CNS - brain - stim. - percep. - body percep. - smell - psychosis - time percep. - delusion - paranoia - halluc. - aud. halluc. - vis. halluc. - olf. halluc. - tact. halluc. - gust. halluc. - eye - mydr. - USA - coca leaf - dr. comp. amph. - dr. comp. opium - alcohol

The earliest account of cocaine hallucinations was published in 1859 by Mantegazza who self-administered coca leaves and experienced "phantasmagoric images." He felt as though he were flying through the air amid colourful sights. Sigmund Freud published a paper in 1887 describing the tactile hallucination of small animals moving beneath the skin. Magnan and Saury in 1889 described these tactile hallucinations in more detail, and they have since been referred to as Magnan's sign or cocaine bugs. The author of the present paper examined 85 recreational cocaine users between 21 and 38 years of age who had consumed at least 1 g a month intranasally. Perceptual phenomena such as increased light-sensitivity were reported by 37 subjects (43.53%), all of whom suffered from chronic mydriasis (dilated pupils). Fifteen subjects experienced several types of hallucination after six months of use, usually during a binge. Visual hallucinations (13 Ss) occurred with eyes closed or open, and took the form of flashing lights or geometric patterns. Tactile hallucinations (11 Ss) were normally associated with chronic high doses, and consisted of itching skin, the sensation of insects beneath the skin, and the impression of people brushing against the body. Olfactory hallucinations (6 Ss) involved the smell of smoke, gasoline, feces, urine and garbage. Auditory hallucinations (3 Ss) were of whispering voices, and gustatory ones (3 Ss) were characterized by the absence of perception of strong tastes. Since cocaine is a strong CNS stimulant, some researchers attribute these various hallucinations to cortical arousal.

227 Siegel, R.K.
COCAINE SMOKING.
New England Journal of Medicine 300(7): 373, 1979.

E. - lett. ed. - human - user - chronic - inhal. - i.v. - dose/resp. - intranasal - toxicity - hist. of coc. - o.d. - resp. depr. - anxiety - paranoia - euphoria - dysphoria - affect - sleep - hyperact. - schizophrenia - psychosis - pulse - respir. - anorexia - mydr. - dependence - wt. loss - USA - free-base - hydrochloride - coca leaf - dr. comp. heroin

In this letter to the editor, the author remarks on the relatively few clinical problems arising from recreational cocaine use via the intranasal route of administration. However, the recent trend of free-basing (smoking the cocaine alkaloid) is associated with a high risk of dependency and overdose, as well as adverse reactions like delirium and anxiety. This risk is due to the failure of smokers (as opposed to snorters) to adjust their dosage, so that they have a tendency to escalate both quantity and frequency sometimes to the point of exhaustion. Free-base smoking leads to dilated pupils, anorexia (lack of appetite), hyperactivity, insomnia, weight loss and fast pulse. Psychological reactions vary from manic euphoria to depressive dysphoria to paranoid psychosis. Thus, it is important for physicians to inquire about drug histories and routes of administration when presented with symptoms resembling those outlined above.

228 Siegel, R.K.
LONG-TERM EFFECTS OF RECREATIONAL COCAINE USE: A FOUR YEAR STUDY.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 11-16, 1980.

E. - exp. pap. - human - male - female - adult - user - oral - i.v. - i.m. - s.c. - dose/resp. - top. admin. - intranasal - toxicity - side-effect - price - stim. - percep. - subj. change - concent. - anxiety - paranoia - euphoria - lethargy - irritability - affect - body percep. - interper. rel. - vis. halluc. - tact. halluc. - sex - anorexia - nose - rhinitis - mydr. - vision - reverse tolerance - wt. loss - USA - coca leaf - free-base - hydrochloride - dr. comp. amph. - alcohol - cannabis - amph. - barb. - halluc. - caffeine

Ninety-nine cocaine users (85 male, 14 female), aged 21-38 yr, who had consumed at least 1 g/month for 12-months prior to the study agreed to participate in questionnaires, interviews, personality tests and physical examinations to determine long-term effects of cocaine use. The study lasted for four years, during which test periods occurred every six months. All subjects reported experience with other drugs besides cocaine, as follows: alcohol (100%), cannabis (100%), amphetamines (27%), barbiturates (20%), hallucinogens (10%), and opiates (2%). Most, however, considered cocaine their drug of choice and ranked it highest for producing euphoria. They also liked it as a help in social situations; for its convenience, quick action and minimal side-effects; and for its status appeal. Average amounts of money spent on cocaine per month ranged from $575 to $2000, from 1975 to 1978. The most common route of administration was intranasal, especially at the beginning of the study, but by 1978 10% had switched to free-base smoking. The average dose (corrected for purity) was 8.7 mg with a cokespoon, and 14.5 mg with lines. Smokers consumed about 0.33 g per episode. These amounts yielded an average of one to four grams/month, and were almost always taken in a social setting. Tables are given outlining the positive and negative acute and long-term effects, as reported by users. Positive acute effects include euphoria, stimulation, reduced fatigue, sexual stimulation and increased sociability; positive long-term effects include increased energy, mood elevation and weight loss. Negative acute effects are listed as restlessness, anxiety, hyperexcitability and irritability; negative chronic, as perceptual changes, nasal problems and fatigue. Generally, the adverse effects were associated with binge use and were consistently overshadowed by desirable results.

229 Siegel, R.K.
COCAINE AND SEXUAL DYSFUNCTION: THE CURSE OF MAMA COCA.
Journal of Psychoactive Drugs 14(1-2): 71-74, 1982.

E. - rev. - case rep. - human - male - female - user - daily user - acute - chronic - inhal. - intranasal - oral - i.v. inject. - dose/resp. - top. admin. - anesth. - toxicity - hist. of coc. - price - tremor - seizure - coma - stim. - abnor. behav. - aud. percep. - pain - subj. change - psychiat. - paranoia - euphoria - dysphoria - aggress. behav. - suicide - homicide - sleep - psychosis - halluc. - disinhib. - sex - sex diff. - sex. behav. - impotence - aphrodisiac - homosexuality - reprod. tox. - anorexia - thirst - craving - compulsion - USA - S. Am. - coca paste - coca leaf - free-base - hydrochloride

Historically cocaine has been associated with the attributes of femininity and sexuality. Ancient Incan iconography depicts a variety of coital positions as well as homosexuality and bestiality thought by some to represent behaviours induced by the chewing of coca leaves. Reports dating back to the early 1900s mention cocaine's association with sexual arousal and performance. Excessive use was thought to cause impotence in men and sterility in women. One author (Maier, 1926) suggested that the chewing of coca leaves could be sexually stimulating in itself and hence used as a substitute for ordinary sexual activity. Many users today consider cocaine to be an aphrodisiac, allowing for both enhancement and control of sexual pleasure. Intravenous injection is said to produce orgasmic sensations, while intranasal inhalation causes a more subtle feeling of sexual energy. Topical administration to the genitals or anus will result in anesthesia. Recent investigations have discovered few cases of sexual dysfunction due to cocaine use; when dysfunction does occur it is the result of large doses. However, in South America chronic smoking of coca paste has been associated with a high incidence of sexual problems such as apathy or aggressiveness. Free-base (i.e., a purified product of cocaine hydrochloride) has been described as a powerful aphrodisiac, giving sensations of excitation and arousal which last for about 20 min. Other acute effects of cocaine smoking include euphoria, restlessness, slurred speech, thirst, loss of appetite, dilated pupils and tremors. Some chronic effects are chapped lips, chest and back pain, hypertension, insomnia, hallucinations and paranoia. Four brief case reports are given to show instances of sexual dysfunction due to cocaine smoking. One

29-year-old male experienced impotence after consuming four grams of free-base a day for three years. A 28-year-old male was unable to maintain an erection during intercourse after smoking 14 g free-base a day for three weeks. A 23-year-old female smoked unspecified large amounts of free-base for two months and became frantic with desire for any sort of sexual release; eventually she hallucinated, blacked-out, and suffered from a seizure. Another woman, 24-years-old, used free-base compulsively for six months and was unable to achieve orgasm; after a suicide and murder attempt, she was institutionalized. It is speculated that much of the sexual appeal of cocaine derives from its association with glamour, money and power.

230 Siegel, R.K. and Hirschman, A.
MORENO AND THE FIRST STUDY OF COCAINE: A HISTORICAL NOTE AND TRANSLATION.
Journal of Psychoactive Drugs 15(3): 219-220, 1983.

E. - hist. pap. - human - frog - in vivo - acute - exp. admin. - inject. - anesth. - toxicity - hist. of coc. - price - musc. rigidity - convuls. - behav. - psychomot. - respir. - heart rate - stim. - death - mydr. - dr. comp. strychnine

The first study on cocaine was written by Thomas Moreno y Maiz in 1868. Despite the date of publication, many of his observations on the local anesthetic and other pharmacological properties of the drug hold true today. Moreno commented on cocaine's high price; the effect of an injection on a frog, including dilated pupils; the complexity of cocaine's effects, such as its ability to produce convulsions and death, sensory stimulation, incoordination, and anesthesia without total loss of motor control. This early researcher, now all but forgotten, also foresaw great medical and financial benefits to be had from cocaine.

231 Sillen, A.
COCA AND COCAINE - 1981.
American Journal of Physical Anthropology 58(3): 348-349, 1982.

E. - bk. rev. - human - oral - therap. use - hist. of coc. - chem. - hypoglycemia - delusions - sleep - thirst - stim. - N. Am. - S. Am. - Europe

The author gives a mixed review of the Journal of Ethnopharmacology issue (Vol. 3 (2 & 3): pp. 273, 1981) devoted entirely to coca and cocaine. He calls it an important new publication, but regrets the emphasis on history and science to the exclusion of analysis and interpretation. A clear distinction is made between the effects of coca chewing by South American Indians and those of recreational cocaine use by Europeans and North Americans, the latter practice thought to incur greater health risks. One chapter is criticized for its obsessive repetition about the psychedelic qualities of coca. Another criticism is made of the journal issue's tendency to show more interest in the plant than in those who consume it. The articles on chemistry are praised as being critical and detailed. A final chapter on therapeutic uses (ranging from treatment of toothache to a cure for hypoglycemia) is considered overly optimistic. In conclusion, this work is of interest to those studying the role of coca in the history of human adaptation but it lacks meaningful discussion.

232 Siomopoulos, V.
COCAINE, AMPHETAMINE, AND TRICYCLIC ANTIDEPRESSANTS AND SYNAPTIC TRANSMISSION.
Lancet i(7913): 988-989, 1975.

E. - lett. ed. - dose/resp. - pharmacol. - chem. - CNS - neurol. - brain chem. - neurotrans. - convuls. - epineph. - reverse tolerance - psychosis - dr. comp. amph. - dr. comp. antidepress.

In this letter to the editor, the author observes that repeated doses of small amounts of cocaine lead to increased behavioural and convulsive effects. One explanation of this phenomenon is "pharmacological kindling" of the limbic system, otherwise known as reverse tolerance. Amphetamines and tricyclic antidepressants exhibit the same property. Cocaine-induced convulsions after repeated small doses may be due to a gradual build-up of norepinephrine in the synaptic cleft in neurons in the CNS. The author discusses this possibility on a fairly technical pharmacological level.

233 Smart, R.G., Liban, C. and Brown, G.
COCAINE USE AMONG ADULTS AND STUDENTS.
Canadian Journal of Public Health 72(6): 433-438, 1981.

E. - survey - human - male - female - adult - adoles. - user - law - hist. of coc. - epidem. - sex diff. - sleep - age - cognit. - dependence - physical dep. - psych. dep. - withdrawal - craving - USA - Can. - S. Am. - cannabis - alcohol - LSD - heroin - tobacco - Coca-Cola - coca leaf

Cocaine is a natural product of the coca plant which grows in South America, and was first isolated in about 1860. In North America today it is regarded as a dependency-producing drug by the World Health Organization and its distribution is restricted by the

Narcotic Control Act. It produces intense psychic dependence and a withdrawal syndrome characterized by craving and disrupted sleep, but is not considered physically addictive. In Canada, very little use of cocaine was recorded until 1976 when 265 convictions for possession were made. The authors discuss frequency of use based on two surveys: one of a high school population and the other among adults. Generally, data on user populations both in Canada and the USA are scant. For the first survey, 4650 high school students from 240 classes in 104 Canadian schools responded to an anonymous questionnaire. It was found that 3.8% had used cocaine in the past year, and of these 62% had tried it only once or twice. Only 1% of the users had consumed it 40 times or more. The cocaine users tended to be 14 to 17 years-old (66%); male (63%); in grades 9-11 (61%); achievers in the area of 70% in school marks; and users of tobacco, alcohol and cannabis. Thirty-nine per cent of cocaine users reported having problems with alcohol and 49% reported other drug problems. For adults, a household survey was administered in Ontario's Durham Region. Generally, the findings paralleled those for the students, i.e., again users tended to be young males with alcohol and other drug problems. It is noteworthy that the adult survey provided little evidence to support the stereotype of the wealthy middle-class user. On the contrary, incomes of users were average and their social status scores were below average. Analysis of results of the two surveys shows that the best predictors of cocaine use are use of heroin, LSD, and other hallucinogens.

234 Smith, D.E.
COCAINE ABUSE 1977.
In: Smith, D.E. (ed.), Multicultural View of Drug Abuse. Boston: G.K. Hall & Co., 116-131, 1978.

E. - rev. - human - male - female - adult - user - White - acute - chronic - self-admin. - inhal. - oral - i.v. inject. - dose/res. - top. admin. - intranasal - toxicity - treatm. - law - o.d. - price - CNS - resp. depr. - depression - stim. - anxiety - paranoia - euphoria - aggress. behav. - sleep - crim. behav. - mult. drug use - prog. drug use - psychosis - aud. halluc. - vis. halluc. - rhinitis - sex. behav. - sex diff. - dependence - physical dep. - psych. dep. - withdrawal - wt. loss - death - USA - S. Am. - coca leaf - opiates - heroin - cannabis - dr. comp. amph. - LSD - alcohol - barb. - diaz. - antidepress. - procaine - tetracaine - lidocaine - methadone

Cocaine is a CNS stimulant which is becoming increasingly popular among middle-class Americans for recreational use. However, up until recently its high cost and low availabilty have prevented it from becoming a significant drug of abuse. The author emphasizes the differences between its abuse potential (which may be large) and the extent to which it is actually abused at present (which may still be relatively small). Several case reports are given to illustrate patterns of cocaine abuse, including one of a 31-year-old white male patient at the Haight-Ashbury Clinic. This middle-class individual had become accustomed to consuming about two grams/day, worth $180. He experienced such adverse effects as psychosis, auditory and visual hallucinations, paranoia, tension and insomnia. He attempted to curb these unpleasant consequences with self-administration of heroin which relaxed him considerably. This type of abuse pattern is not likely to be produced in any laboratory. All routes of administration are used in the US, including oral, topical, and i.v., but the most common is intranasal snorting. Each line, often inhaled though a rolled dollar bill, contains about 25 mg and produces 20 to 40 min stimulation. Intravenous administration causes an intense rush of pleasure which dissipates rapidly. There is no doubt that cocaine does lead to psychological dependence, but not all are agreed about whether or not it causes physical dependence. Some view the depression experienced by habitual users upon cessation of use as a withdrawal phenomenon. Death from overdose is rare, but not unheard of: one 1977 study documented 26 deaths related to cocaine abuse alone. Treatment for toxicity may involve administration of such drugs as diazepam or antidepressant, or hospitalization with respiratory assistance and a life support system. Physicians must also be alert to the presence of adulterants in many substances sold as pure cocaine, particularly if the filler happens to be another abusable drug such as heroin. The author advocates a responsible attitude towards cocaine with better information about its effects for professionals and laypersons alike.

235 Smith, D.E. and Wesson, D.R.
COCAINE.
Journal of Psychedelic Drugs 10(4): 351-360, 1978.

E. - rev. - case rep - human - user - male - female - White - acute - chronic - inhal. - intranasal - oral - i.v. inject. - dose/resp. - top. admin. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - o.d. - price - CNS - seizure - react. time - resp. depr. - brain - depression - stim. - anxiety - paranoia - euphoria - aggress. behav. - sleep - crim. behav. - mult. drug use - psychosis - vis. - halluc. - aud.

halluc. - hypertens. - sex. behav. - aphrodisiac - nose - dependence - physical dep. - psych. dep. - withdrawal - death - USA - S. Am. - coca leaf - dr. comp. amph. - dr. tr. diaz. - dr. int. heroin - alcohol - barb. - cannabis

The abuse potential of cocaine may have been underestimated until recently because its high cost prohibited frequent use and therefore toxicity was seldom observed. However, now this CNS stimulant is gaining popularity among higher income-level groups. A case report is given of a 31-year-old white male heroin addict who also used cocaine and reached a dose average of two grams cocaine/day (costing $180/day). He suffered from auditory and visual hallucinations, paranoia, tension and insomnia. Only heroin seemed to ease the discomfort caused by heavy cocaine use, so his heroin dependence re-asserted itself. One reason for the recent popularity of cocaine is the belief held by many that it is a harmless drug which does not produce dependence. The authors criticize the cocaine research of the past on the basis that it was done by persons who had no direct experience with the drug and therefore tended to promulgate biased or distorted information. Street users generally consume doses of 0-200 mg at a time; the higher the dose the greater the likelihood of adverse reaction. The most frequent negative effects parallel those resulting from amphetamine abuse, i.e., depression, psychological dependence and acute anxiety. Oral administration is found mainly in South America where coca leaves are chewed in a social setting for their stimulant properties. Intranasal inhalation (referred to as snorting) is the most common route of administration among recreational users. After snorting 25-30 mg the user may experience euphoria characterized by talkativeness and heightened feelings of self-confidence. This pleasurable sensation will wear off within 40 min unless consumption is resumed. Repeated use can bring on undesired results such as extreme agitation, suspiciousness and paranoid psychosis. Chronic rhinitis (i.e., inflamed nasal tissue) and a perforated nasal septum have been known to occur among heavy snorters. Violence has also been reported as a result of high doses. Cocaine can be absorbed through the mucous membranes of the gums, throat and vagina; it is considered an aphrodisiac by some users. Smoking is not a common means of consuming cocaine in the USA. Intravenous injection causes rapid, intense pleasure like "electricity through the brain." This rush fades within 10 min, leaving the user with a craving for more (though there is no withdrawal syndrome if consumption ceases). Deaths due to overdose have occurred but are far from common; death is preceded by seizures and respiratory arrest. Laboratory analyses have indicated that 26% of street cocaine has been adulterated with other substances such as amphetamines. Medically cocaine may have therapeutic value in the diagnosis and treatment of mental disorders. It is recommended that workers in community drug programmes become better informed about the uses and abuse potential of cocaine.

236 Smith, J.W.
AMPHETAMINE AND COCAINE ABUSE.
Postgraduate Medicine 48(1): 57-59, 1970.

E. - lett. ed. - human - animal - toxicity - chronic - brain - CNS - dependence - amph. - morph. - nicotine - alcohol

The author writes a letter refuting the notion that chronic use of cocaine and amphetamine does not cause physical damage. It is clear from animal and human observation that chronic cocaine intoxication results in organic problems due to CNS degeneration. There is no justification for a false sense of security about either drug.

237 Smith, R.B. and Petruscak, J.
DEFENCE OF MEDICAL USE OF COCAINE.
Journal of the American Medical Association 231(4): 346, 1975.

E. - lett. ed. - human - therap. admin. - top. admin. - anesth. - therap. use - dose/resp. - body wt. - death - hypertens. - thyroid - epineph. - reserpine - guanethidine - methyldopa - dopamine - monoamine oxidase inhibitors - tricyclic antidepress. - desipramine - digitalis

No other topical anesthetic is as effective or long-lasting as cocaine. However, it should not be used in combination with epinephrine, nor on patients taking reserpine, tricyclic antidepressants, digitalis and many other drugs. As long as the dose does not exceed 1 mg/kg of body weight in a 1%-4% solution, cocaine can be used safely in otolaryngology and has been associated with fatality in only two cases, both of which involved epinephrine as well.

238 Snipes, J.A.
COCA ERYTHROXYLON.
Therapeutic Gazette 1(11): 330, 1880.

E. - lett. ed. - case rep. - human - oral - dose/resp. - therap. admin. - treatm. - nausea - opium - coca leaf - Erythrox. coca

The author prescribed five grains of solid extract of coca leaves, increasing to one drachm every two to three hours, as a remedy for opium addiction. The patient did not recover, but experienced nausea and disgust for the medicine. A note from the journal editor is appended, stating that in medicine it is just as important to record failures as it is to record successes.

239 Snyder, S.H.
CNS STIMULANTS AND HALLUCINOGENS.
In: Mulé, S.J. and Brill, H. (eds.), Chemical and Biological Aspects of Drug Dependence. Cleveland: Chemical Rubber Co., 55-63, 1972.

E. - book - rev. - human - animal - male - female - user - acute - chronic - inhal. - oral - intranasal - exp. admin. - hist. of coc. - CNS - depression - stim. - abnor. behav. - psychomot. - percep. - subj. change - panic - paranoia - euphoria - lethargy - hyperact. - prog. drug use - delusions - affect - body percep. - brain - chem. - schizophrenia - psychosis - aud. halluc. - vis. halluc. - disinhib. - sex - sex. behav. - tolerance - dependence - psych. dep. - withdrawal - addiction - Europe - USA - S. Am. - dr. comp. amph. - caffeine - LSD - digitalis - reserpine - mescaline

The term "stimulant" in popular usage refers to a drug that produces heightened alertness and/or elevation of mood. Cocaine and amphetamine are two stimulants often associated with problems of dependence. The drugs are similar in their effects and mechanism of action, but documentation of cocaine abuse goes back further in the history of European and American medical literature. Sigmund Freud described the effects of cocaine ingestion in very favourable terms, remarking that after a dose of 0.05 to 0.10 g one experienced intellectual and physicial vigor, euphoria, and an absence of need for food, drink or rest. Cocaine and amphetamine share the curious property of exerting no stimulant action on an individual at rest. Cocaine addicts fall into depression upon cessation of drug intake, varying in intensity with the amount they were accustomed to having (i.e., the greater the drug habit, the greater the reaction upon withdrawal). However, no other withdrawal phenomena have been recorded. Women show signs of hypersexuality under the influence of cocaine and men may indulge in numerous sexual aberrations. Both sexes exhibit compulsive, repetitive behaviour and absorption in mundane tasks such as cleaning an apartment over and over again. A paranoid psychosis may develop, similar to acute paranoid schizophrenia and characterized by delusions of persecution and auditory and visual hallucinations. Habitual users escalate their dose up to 10 to 50 times that which a novice would try, a pattern suggesting the development of tolerance. A discussion of the amphetamines and hallucinogens ensues.

240 Solîz, A.
LIMITATION OF THE PRODUCTION OF COCA LEAF IN BOLIVIA.
Bulletin on Narcotics 4(2): 16-17, 1952.

E. - gen. disc. - human - oral - cognit. - hunger - S. Am. - Peru - Bolivia - coca leaf

Coca chewing in Peru and Bolivia is not a vice, but a bad habit resulting from poor nutrition. The habit should be suppressed gradually while social and economic conditions are improved. Coca chewers tend to be intellectually and morally backward, and cannot be expected to give up the habit all at once, as was pointed out by the United Nations Commission of Enquiry on the Coca Leaf.

241 Sollier, P.
UN CAS REMARQUABLE DE COCAINOMANIE. [A Remarkable Case of Cocaine Addiction.] (Fre.)
Journal de Médecine de Paris 3: 40-41, 1910.

F. - case rep. - clin. pap. - human - male - adult - user - chronic - inhal. - intranasal - s.c. - dose/resp. - inject. - toxicity - treatm. - paranoia - prog. drug use - irritability - delusions - affect - halluc. - personality disint. - sleep - dependence - physical dep. - psych. dep. - habit - withdrawal - wt. loss - coc. crystals - alcohol - morphine - heroin

Many persons have false ideas about drug addiction and its treatment. There have been recent publications containing the erroneous notion that cocaine addiction is incurable and that abrupt withdrawal can result in coma. Pure cocaine addiction is relatively rare compared with addiction to morphine and cocaine. A case report is given of a physician who became first a morphine addict and then a cocaine addict. He initially used cocaine for the relief of toothache, but rapidly developed á habit and escalated his dose to 8, 10 or 12 g/day. Eventually his mood changed, he suffered from delusions of persecution, hallucinations, irritability, insomnia, weight loss and an inability to work. Abrupt withdrawal did not cause him any undue suffering. In two months, with the help of bed-rest and warm showers, he returned to normal weight and good health, with no desire to resume the cocaine habit. The author believes no physical need develops for this drug; the craving is in the mind only. Therefore, gradual withdrawal is useless for curing victims of cocaine addiction. Route of administration is important in determining how easily a patient will overcome the habit. If he is used to s.c. administration, for example, he will recover more rapidly than someone used to the intranasal route. Nevertheless in all cases complete cure should be feasible. Recidivism will occur among physicians who have easy access to the drug, or among patients who are lulled into a false sense of security because of the absence of painful withdrawal.

242 Sonnenschein, R.
THE INDISPENSABLE USES OF NARCOTICS IN THE PRACTICE OF OTOLARYNGOLOGY.
Journal of the American Medical Association 96(16): 1302-1303, 1931.

E. - clin. pap. - human - s.c. - intranasal - submucous - inject. - anesth. - therap. admin. - toxicity - therap. use - treatm. - convuls. - epineph. - death - procaine hydrochloride

Cocaine is a very useful local anesthetic in intranasal surgery, but must be applied with great caution as it is liable to give rise to alarming adverse effects. In at least 43 cases, it has been known to cause death; in a number of others, it has been associated with convulsions and idiosyncratic reactions. The author advises against s.c. or submucosal injection as well as mixing cocaine with epinephrine. Often it is possible to substitute another substance such as procaine hydrochloride for cocaine, thus avoiding the risk of toxicity.

243 Spotts, J.V. and Shontz, F.C.
DRUG-INDUCED EGO STATES. I. COCAINE: PHENOMENOLOGY AND IMPLICATIONS.
International Journal of the Addictions 19(2): 119-151, 1984.

E. - psychol. pap. - human - male - adult - daily user - acute - chronic - inhal. - intranasal - i.v. - inject. - dose/resp. - top. admin. - anesth. - toxicity - treatm. - epidem. - o.d. - CNS - tremor - seizure - reac. time - coma - resp. depr. - fainting - vertigo - convuls. - depression - stim. - cognit. - percep. - time percep. - space percep. - pain - subj. change - psychol. - psychiat. - panic - anxiety - euphoria - aggress behav. - motiv. - sleep - hyperact. - crim. behav. - delusions - affect - thought disorder - psychosis - aud. halluc. - tact. halluc. - vis. halluc. - heart rate - blood press. - respir. - sex. behav. - aphrodisiac - nausea - liver - hepatitis - dry mouth - anorexia - urine - sweating - nose - mydr. - tolerance - dependence - physical dep. - psych. dep. - death - age - body temp. - USA - S. Am. - Europe - coca leaf - _Erythrox. coca_ - free-base -

dr. comp. amph. - opiates - barb. - alcohol - heroin - LSD - marihuana

The popularity of cocaine has increased dramatically over the past 20 yr, with an estimated 4 or 5 million regular users in the USA in 1982. Heavy consumption is associated with devastating physical and psychological effects, but until one decade ago little was known about the nature of cocaine dependence. If present trends continue, it will not be long before this drug problem takes on international importance and therefore it behoves the experts to become better informed. Cocaine is an alkaloid derived from the leaves of the plant Erythroxylon coca which grows in Peru, Chile and Bolivia. Its two main pharmacological actions consist of local anesthesia and CNS stimulation. Because the rate of absorption readily exceeds the rate of detoxification, it is highly toxic and is considered fatal at 1200 mg orally. However, as little as 20 or 30 mg may cause death if applied topically to a mucous membrane. Well-known effects include quick rise in heart and respiration rates and in blood pressure; euphoria; anorexia; insomnia; confusion; depression; visual, auditory and tactile hallucinations; and acute paranoid psychosis. Intense psychic dependence develops, but not physical dependence or tolerance. As a recreational drug, cocaine is dangerous and has resulted in rapid death due to respiratory collapse after i.v. injection. Free-basing, or smoking a purified form of cocaine, has recently become popular even though it is a risky practice. Nine male chronic users who preferred cocaine to all other drugs were studied in 1974-1975. All had a history of several years of daily consumption, with doses ranging from 20 to 3000 mg. The vast majority had tried both the i.v. and intranasal routes of administration. The subjects' personal, family and drug-use characteristics are summarized in table form. A third table gives an extensive list of physiological and psychological effects, as reported by users. Among the former appear dizziness, tremors, sweating, tight chest, elevated pulse, itching, nosebleed, loss of appetite, fainting, insomnia, nausea, dilated pupils and excessive mental activity; among the latter, feelings of increased or decreased self-control, euphoria, restlessness, aggression, depression, sexual stamina, panic, violence, optimism, courage, talkativeness, loss of ambition, anxiety and delusions. A very detailed description is given of the acute subjective effects of cocaine intake. Expansion of the ego is defined as a feeling of rising above the problems of existence and being in complete control of one's destiny. It is noted that the likelihood of unpleasant reactions increases with repeated use. A lengthy psychological profile is given for low-level and heavy users, with a mention of the lack of spirituality (not defined) among the latter who "turn to cocaine for salvation." In this study, the heavy user emerges as someone who does not trust others; who strives for independence; who has intense but undirected anger; and who frequently experiences despair as reflected in feelings of defeat, disappointment and betrayal.

244 Stark, T.W., Pruet, C.W. and Stark, D.U.
COCAINE TOXICITY.
Ear Nose and Throat Journal 62(3): 155-158, 1983.

E. - rev. - human - user - inhal. - intranasal - oral - i.v. - inject. - anesth. - toxicity - therap. use - treatm. - law - hist. of coc. - o.d. - CNS - hyperref. - tremor - resp. depr. - convuls. - depression - stim. - vocaliz. - euphoria - suicide - homicide - crim. behav. - heart rate - card. arrest - respir. - nausea - liver - vomiting - eye - nose - death - USA - S. Am. - Peru - Bolivia - Erythrox. coca - free-base - alcohol - heroin

The problems related to cocaine abuse have been drawn to the attention of the public recently because of cases of overdose, suicide and other criminal behaviours among famous persons. Obtained from the South American shrub, Erythroxylon coca, cocaine is a stimulant which causes euphoria, greater endurance and diminished need for food. As a result of CNS stimulation, the user experiences excitement, restlessness, and talkativeness, followed by incoordination, tremors, hyperreflexia, possibly nausea and vomiting, and convulsions. Respiratory and heart rates increase, sometimes as a prelude to cardiac failure and respiratory arrest (with large i.v. doses). The two most common routes of administration among recreational users are intranasal and i.v. injection, either of which can lead to toxicity, although the i.v. route has more often been associated with fatality. The term "freebasing" refers to a recently popular method of ingestion whereby a purified form of the street drug is smoked. There is a fire hazard in the process of purifying the initial drug and a higher risk of toxicity due to the potency of the resulting product. It is difficult to state a safe maximum dose because of wide individual variability, but it is recommended that therapeutic doses be limited to less than 200 mg. One toxic effect often discussed but seldom documented is that of nasal septum perforation among sniffers.

245 Stevens, A.
FREUD AND COCAINE: THE FREUDIAN FALLACY.
British Journal of Psychiatry 145 (Aug.): 223-224, 1984.

E. - bk. rev. - human - male - adult - user - acute - chronic - intranasal - top. admin. - therap. admin. - hist. of coc. - affect - card. arrhyth. - sex - fainting - psychol. - neurol. - epilepsy - psych. dep. - phys. dep.

The author gives an unfavourable review of the book Freud and Cocaine: The Freudian Fallacy by E.M. Thornton (London: Blond & Briggs, 1983). He accuses the "authoress" of being a remorseless iconoclast who is not medically qualified. She downplays Freud's intellectual achievement on the grounds that he was addicted to cocaine and hence pathologically preoccupied. His usage began with therapeutic topical applications to the nasal mucosa but eventually became chronic, accounting for his moodiness, cardiac arrhythmia, fainting spells, high opinion of his own prolific work, emphasis on sexuality, etc. Thus, according to E.M. Thornton, the existence of psychoanalytic theory itself is due to cocaine. The reviewer of her book considers this opinion to be naive and narrow-minded.

246 Stimmel, A.F.
COCA IN THE OPIUM AND ALCOHOL HABITS.
Therapeutic Gazette 2(7): 252-253, 1881.

E. - clin. pap. - human - male - female - oral - therap. admin. - therap. use - treatm. - depression - stim. - addiction - habit - Erythrox. coca - opium - morph. - alcohol - USA - France

The author discusses coca as a substitute-drug in the treatment of opium and alcohol dependence. Opium addicts soon learn to have "confidence" in coca. Alcoholism is a harder habit to treat than morphine and opium addiction, but can be cured with ad libitum doses of coca fluid extract. Stimulant abusers in general are "lunatics" who must be humoured. It is recommended that other physicians employ coca in the manner described.

247 Suarez, C.A., Arango, A. and Lester, J.L., III.
COCAINE-CONDOM INGESTION. SURGICAL TREATMENT.
Journal of the American Medical Association 238(13): 1391-1392, 1977.

E. - case rep. - clin. pap. - human - male - adult - adoles. - oral - dose/resp. - anesth. - toxicity - treatm. - hist. of coc. - law - CNS - seizure - coma - stim. - brain - memory - euphoria - crim. behav. - orientation - blood press. - pulse - respir. - liver - stom. - g.i. - vomiting - urine - eye - mydr. - death - Europe - USA - S. Am. - Peru - Bolivia - LSD - cannabis - methaqualone - dr. tr. diaz.

Three case reports are given of individuals who attempted to smuggle cocaine into the US by swallowing drug-filled condoms. The first, a 31-year-old man, ingested six condoms containing five grams cocaine. During surgery, one of the bags was broken causing the patient to experience toxicity manifested by disorientation and coma. Emergency procedures succeeded in saving his life although some signs of residual brain damage remained. The second, a 17-year-old male, died after swallowing 54 condoms of cocaine containing about four grams each. Post-mortem findings indicated that one bag had ruptured. The third, a 22-year-old male, also died having swallowed 75 packets of cocaine, eight of which had burst. A very brief summary is given of the pharmacology of cocaine, outlining its CNS effects such as euphoria, restlessness and decreased fatigue. Operative intervention is recommended in cases of cocaine poisoning due to ingestion of condoms.

248 Swett, C., Jr.
COCAINE - ITS HISTORY, USES AND EFFECTS.
Social Science and Medicine 11(1): 55, 1977.

E. - bk. rev. - human - intranasal - toxicity - hist. of coc. - law - CNS - tremor - convuls. - stim. - anxiety - paranoia - euphoria - sleep - subj. change - halluc. - tact. halluc. - card. arrest - respir. - body temp. - sex behav. - appetite - nose - tolerance - withdrawal - physical dep. - psych. dep. - alcohol - Bolivia - Peru

The author has mixed feelings about the book Cocaine - Its History, Uses and Effects (by R. Ashley, St. Martin's Press, New York, 1975), which is "intriguing as well as irritating." The book contains a pro-legalization bias, but also gives good information on the drug's pharmacology and history. Some noted effects of this CNS stimulant are euphoria, greater energy, sexual stimulation and raised body temperature. Tremors, convulsions, cardiac failure, anxiety, insomnia and sore nose are listed as adverse consequences of use.

249 Taggart, R.
COCA IN THE OPIUM HABIT.
Therapeutic Gazette 2(5): 169, 1881.

E. - case rep. - human - male - adult - treatm. - craving - habit - alcohol - opium - morph.

The author prescribed coca as a substitute drug in a man who used opium very heavily. The treatment was successful and the patient lost his desire for opium.

250 Tatum, A.L. and Seevers, M.H.
EXPERIMENTAL COCAINE ADDICTION.
Journal of Pharmacology and Experimental Therapeutics
36: 401-410, 1929.

E. - exp. pap. - human - animal - pig - cat - rabbit - mouse - dog - guinea pig - monkey - male - female - oral - inject. - i.v. - exp. admin. - acute - chronic - dose/resp. - toxicity - CNS - stim. - convuls. - irritability - anxiety - hyperact. - subj. change - tremor - sleep - halluc. - tact. halluc. - psychosis - respir. - sex. behav. - priapism - appetite - urine - skin - musc. - tongue - ear - eye - mydr. - physical dep. - tolerance - sensitization - addiction - withdrawal - abstinence - body wt. - death - dr. tr. morph. - dr. comp. ephedrine

Some authors believe that repeated cocaine use leads to tolerance, causing individuals to self-administer toxic or fatal doses. Others contend that the escalation of dose exhibited by some addicts does not necessarily indicate tolerance development, but may merely indicate a state of "passionate addiction." Cocaine users have been known to reach a daily intake of six to eight grams, until eventually the nervous system is so irritable as to require sedation with morphine. Signs of CNS over-stimulation include hallucinations and insomnia. Several animal experiments are described to illustrate lack of tolerance development to cocaine; in fact, some of them indicate an increased sensitivity after continued use. Sexual irregularities including nymphomania in women often result from this drug.

251 Taylor, W.J.R., Chambers, C.D. and Dembo, R.
COCAINE ABUSE AMONG METHADONE PATIENTS.
In: Keup, W. (ed.), Drug Abuse. Current Concepts and Research. Springfield, IL: C.C Thomas, 313-327, 1972.

E. - book - human - male - Black - law - urinalysis - habit - addiction - age - crim. behav. - USA - heroin - barb. - amph. - methadone - opiates

Cocaine abuse has been discovered to be fairly widespread among methadone maintenance patients (e.g. 32 out of 173 patients in one sample). The authors studied some of the differences between "cocaine cheaters" and "non-cheaters" and found that cheaters tended to be older (over 35 yr), Black, male, divorced or widowed, and unemployed. Cocaine abuse was also related to longer drug-taking history, previous treatment for addiction, and a history of arrests. Cocaine cheaters tended to continue criminal activities while undergoing treatment and more often than non-cheaters, also abused heroin, amphetamines and barbiturates. The authors suspect that cocaine abuse occurs in all methadone substitution programmes and recommend that a surveillance procedure based on urine samples be employed to detect such abuse.

252 Thomas, J.A. and Knotts, G.R.
THE ABUSE OF MEDICINAL PRODUCTS.
Journal of School Health 41(5): 235-238, 1971.

E. - rev. - human - anesth. - i.v. inject. - toxicity - therap. use - side-effect - o.d. - CNS - resp. depr. - convuls. - depression - stim. - paranoia - euphoria - crim. behav. - delusions - halluc. - heart - respir. - vomiting - USA - aspirin - tranqu. - amph. - barb. - LSD - cannabis - mescaline - morph. - opiates

In modern American society, drug use and abuse are increasing all the time. Although the authors discuss mainly other drugs such as sedatives and amphetamines, they also mention cocaine as a "miscellaneous agent." It is abused for its ability to cause euphoria, hallucinations, and ecstatic thrills, especially via i.v. administration. Psychopathic individuals like cocaine and their mental problems come to the fore under its influence. Adverse side-effects include heart palpitations, paranoid delusions, irregular respiration, vomiting and convulsions. Death can occur if overdose leads to respiratory arrest. The transient CNS stimulation produced by this drug is followed by CNS depression.

253 Thornton, E.M.
IMAGES OF COCAINE.
Lancet i(8367): 46, 1984.

E. - lett. ed. - human - male - adult - toxicity - chronic - therap. use - hist. of coc. - law - price - abnor. behav. - subj. change - psychiat. - paranoia - aggress. behav. - homicide - euphoria - crim. behav. - delusions - halluc. - vis. halluc. - psychosis - personality disint. - asthma - sex - addiction - USA

The author suggests that recent reports of cocaine as a harmless substance are erroneous because they are based on the highly adulterated street drug commonly available. Analysis of some samples has shown them to contain no cocaine whatsoever. History indicates that pure cocaine, as used by late nineteenth century physicians in the US, is very toxic and addictive with the potential to cause paranoid delusions, violence, and disturbing hallucinations. If cocaine is made legal, we can expect to witness similar "horrifying" consequences once again.

254 Tice, F.
THE INDISPENSABLE USES OF NARCOTICS IN THE PRACTICE OF MEDICINE.
Journal of the American Medical Association 96: 944-946, 1931.

E. - rev. - human - top. admin. - s.c. inject. - anesth. - therap. use - pain - toxicity - habit - epineph. - codein - morph. - opium

The author discusses the therapeutic uses of codeine, morphine and opium, especially for the relief of pain. Cocaine used to have value as a local anesthetic, but has now been replaced by other non-toxic remedies such as epinephrine which carries with it no danger of habit formation.

255 Trozak, D.J. and Gould, W.M.
COCAINE ABUSE AND CONNECTIVE TISSUE DISEASE.
Journal of the American Academy of Dermatology 10(3): 525, 1984.

E. - case rep. - clin. pap. - human - adult - male - user - chronic - inhal. - intranasal - blood - skin - hand - finger - toe - nose - amph. - tobacco - marihuana - free-base

Two case reports are given indicating the possibility of a relationship between cocaine use and connective tissue disease. A 40-year-old white male mechanic experienced swelling of the fingers and discoloration of his hands in cold weather. His drug habits included regular use of cocaine on weekends and he noticed a worsening of symptoms with greater cocaine consumption. Scars and ulcers appeared on his hands, but there was no sign of a systemic disease. Another male 24-year-old metal worker experienced blanching of the fingers, sores at the fingertips and discoloration of the toes. He had been snorting cocaine and smoking free-base for five years, but did not use tobacco or amphetamines. Again, there was no evidence of systemic illness. Thus the two patients had in common regular cocaine abuse, spasms in the hands and evidence of connective tissue disease. Clinicians are urged to keep in mind the possibility of cocaine abuse when dealing with vasospastic problems.

256 Ungerleider, J.T.
COCAINE: USE AND ABUSE.
In: Jerí, F.R. (ed.), Cocaine 1980. Proceedings of the Interamerican Seminar on Medical and Sociological Aspects of Coca and Cocaine. Lima, Peru: Pacific Press, 236-238, 1980.

E - gen. disc. - human - adoles. - adult - inhal. - intranasal - toxicity - depression - stim. - anxiety - euphoria - motiv. - prog. drug use - psychosis - price - sex. behav. - compulsion - cannabis - PCP

Cocaine use and abuse are discussed under five categories. Experimental use, usually by intranasal administration, occurs commonly among young and middle-aged persons and is motivated by curiosity; the rewards are euphoria and sexual stimulation. Recreational use occurs more regularly, often in a social setting, yet in a non-compulsive manner with no problem side-effects. Circumstantial use is motivated by the need to combat depression or to enhance athletic, sexual or work performance. Intensified or daily use may result from episodes of great frustration in a person's life, during which self-esteem is threatened and normal coping devices do not work. The fifth category is that of compulsive use which involves frequent and heavy intake over a long period of time, sometimes resulting in psychosis; however, because of difficulty in maintaining a steady supply, cocaine does not lend itself easily to this pattern.

257 Van Dyke, C., Barash, P.G., Jatlow, P. and Byck, R.
COCAINE: PLASMA CONCENTRATIONS AFTER INTRANASAL APPLICATION IN MAN.
Science 19(4229): 859-861, 1976.

E. - exp. pap. - clin. pap. - human - rat - acute - chronic - exp. admin. - inhal. - intranasal - i.m. - s.c. - dose/resp. - anesth. - toxicity - CNS - stim. - brain - euphoria - prog. drug use - psychosis - blood - body wt. - hydrochloride - dr. comp. amph.

Cocaine is both a local anesthetic and a CNS stimulant. Today it is a popular drug of abuse because of the intense euphoria which it produces three to five minutes after intranasal administration. Long-term use may cause a toxic psychosis like that associated with amphetamine abuse. In this experiment, nine human subjects received 1.5 mg cocaine/kg body weight i.m., and peak concentrations were found to occur 15 to 60 min afterwards. The drug persisted in plasma for four to six hours. Variations among individual subjects are discussed in some detail. Peak drug concentration in plasma did not coincide with the subjective high which is usually experienced three to five minutes after intake. Street users, in fact, are known to repeat administrations every 15 min in order to stay high. It is possible therefore that the high is not related to peak blood levels of drug, but rather to the rapidly increasing concentration or to concentrations at brain receptor sites.

258 Van Dyke, C. and Byck, R.
COCAINE: 1884-1974.
In: Ellinwood, E.H., Jr. and Kilbey, M.M. (eds.),
Cocaine and Other Stimulants. New York: Plenum Press,
1-30, 1977.

E. - rev. - human - animal - rabbit - guinea pig - cat - dog - mouse - rat - acute - chronic - inhal. - i.v. - oral - i.p. - intranasal - s.c. - self-admin. - exp. admin. - dose/resp. - anesth. - toxicity - therap. use - hist. of coc. - law - chem. - CNS - parasymp. NS - symp. NS - EEG - aggress. behav. - sex. behav. - seizure - reac. time - resp. depr. - behav. - depression - stim. - paranoia - euphoria - delusions - schizophrenia - psychosis - halluc. - aud. halluc. - tact. halluc. - vis. halluc. - cardiovasc. - blood press. - heart rate - card. arrhyth. - respir. - epineph. - intest. - stom. - liver - bladder - vomiting - anorexia - eye - mydr. - tolerance - withdrawal - sensitization - hypertherm. - death - body temp. - coca leaf - Erythrox. coca - dr. comp. amph. - opium - morph. - alcohol

The intense euphoria resulting from intranasal intake of cocaine has made it an increasingly popular drug, and yet research on its therapeutic and abuse potential has been scarce. A discussion on its history and chemistry is followed by information about its toxicology. Death can occur if CNS poisoning leads to hyperthermia, convulsions, and cardiac or respiratory depression. Different authors give different opinions about safe and lethal dose; as little as 22 mg s.c. was fatal in one case, yet up to 1080 mg s.c. has been survived. The anesthetic properties of cocaine are mentioned in some detail. Other effects related to action on the CNS include mydriasis (pupil dilation); constriction of blood vessels; increased respiratory rate; vomiting; convulsions; seizures; and increased body temperature. Psychologically moderate amounts of this drug cause euphoria, but higher doses can produce psychosis characterized by clear sensorium; paranoid delusions; tactile, auditory and visual hallucinations; and stereotyped behaviour. Tolerance and withdrawal syndrome have not been proven; in fact, there is some evidence for sensitization to effects after repeated use.

259 Van Dyke, C., Jatlow, P., Ungerer, J., Barash, P.G. and Byck, R.
ORAL COCAINE: PLASMA CONCENTRATIONS AND CENTRAL EFFECTS.
Science 200(4338): 211-213, 1978.

E. - exp. pap. - human - animal - male - adult - user - acute - exp. admin. - i.v. - oral - inhal. - intranasal

- anesth. - symp. NS - o.d. - hist. of coc. - euphoria - subj. change - hunger - blood - g.i. - intest. - stom. - death - coca leaf - S. Am. - USA

Plasma concentrations and subjective effects of 2.0 mg/kg cocaine given orally were compared with those of the same amount administered intranasally. Peak plasma levels were similar for both routes, but absorption into the blood was slower for the oral route. The subjects were four adult males with a history of recreational cocaine use. Oral administration produced a subjective high within about an hour. The peak high after oral intake was considered greater than that produced by intranasal administration by three of the four subjects, evoking descriptions of floating and lightheadedness. The authors argue against the common notion that oral consumption of cocaine is ineffective. In 1884, Freud reported euphoria, energy and changes in pulse and respiration as a result of oral cocaine use. It is well absorbed from the g.i. tract. The authors speculate that knowledge of cocaine's effectiveness via the oral route might serve to dampen the glamorous image of this drug which is sometimes associated with "golden spoons, rolled banknotes, and inhalation rituals."

260 Van Dyke, C., Jatlow, P., Ungerer, J., Barash, P. and Byck, R.
COCAINE AND LIDOCAINE HAVE SIMILAR PSYCHOLOGICAL EFFECTS AFTER INTRANASAL APPLICATION.
Life Sciences 24(3): 271-274, 1979.

E. - exp. pap. - human - primate - rat - male - adult - user - _in vivo_ - acute - top. admin. - intranasal - anesth. - toxicity - CNS - reac. time - stim. - subj. change - psychol. - euphoria - dysphoria - affect - dr. comp. amph. - dr. comp. lidocaine - procaine - hydrochloride

Both a local anesthetic and a CNS stimulant, cocaine produces euphoria within five minutes after intranasal application. This euphoria is very similar to that following amphetamine consumption. The authors designed an experiment to test the hypothesis that lidocaine, a local anesthetic, may induce psychoactive effects similar to those of cocaine. Six male adults were administered 0.19 mg/kg, 0.38 mg/kg, and 0.75 mg/kg cocaine hydrochloride, and their subjective reactions were compared to those resulting from administration of the same amounts of lidocaine. Subjects were unaware of the drug or dose being given. Results showed no discernible difference between the cocaine high and the lidocaine high, nor were subjects able to tell which drug had been taken. No dysphoria or adverse effect was reported. In all cases, the drug was administered by topical application to the nasal mucosa. The only difference in reaction to the two drugs showed up in the Addiction Research Center Inventory, a psychological test which evoked "increased responses" after cocaine (nature of responses unspecified). The authors speculate that the difference between cocaine and lidocaine may be subtle or indistinguishable, and that euphoria may be a common effect of other local anesthetics besides cocaine.

261 Van Dyke, C. and Byck, R.
COCAINE USE IN MAN.
In: Mello, N.K. (e.d.), Advances in Substance Abuse: Behavioral and Biological Research, Vol. 3. Greenwich: JAI Press, 1-24, 1983.

E. - bk. - rev. - human - animal - user - acute - chronic - inhal. - intranasal - oral - i.v. inject. - dose/resp. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - law - price - CNS - tremor - reac. time. - depression - stim. - subj. change - psychiat. - paranoia - anxiety - crim. behav. - mult. drug use - interper. rel. - psychosis - aud. halluc. - vis. halluc. - tact. halluc. - personality - heart rate - tachycard. - blood press. - hypertens. - blood - liver - anorexia - mydr. - tolerance - reverse tolerance - dependence - body wt. - death - USA - S. Am. - coca paste - coca leaf - procaine - Erythrox. coca - free-base - hydrochloride - dr. comp. amph. - tobac. - marihuana - alcohol - heroin - morph. - methadone

Cocaine is perceived as a glamorous, expensive, mysterious drug with rich history and mythology attached to it. Before 2500 B.C. coca leaves were chewed in South America, and as the practice evolved it gradually took on religious and cultural importance, particularly around the time of the Inca empire. Today it is estimated that over four million natives of Peru and Bolivia chew the leaves regularly, mainly as a means of coping with the stresses of hard work, high altitude, cold, hunger and illness. In 1860 the active ingredient of coca leaves was isolated, and in the late 1800s and early 1900s many individuals including Mantegazza and Freud experimented freely with cocaine. It was celebrated at that time as a euphoriant and anesthetic. The original Coca-Cola contained cocaine until 1903, and was publicized as "the brain tonic and intellectual soda fountain beverage." However, it was not long before the addictive potential of cocaine was recognized, as well as its ability to produce toxic psychosis and death (rarely). When the Harrison Act restricting the use of cocaine was passed in the USA in 1914, it was not so much out of concern about the drug's health effects as about its perceived ability to encourage violence and sexual excess among minority groups. Use declined thereafter until about 1960 when, for reasons not entirely clear, cocaine suddenly re-emerged as a popular street drug. A recent development in the USA has been the smoking of free-base, an extraction from cocaine hydrochloride, which is considered a "serious form of drug abuse." A more common route of administration is that of intranasal inhalation which produces peak plasma levels and peak psychological effects 15 to 60 min after intake. It has only recently been accepted that the oral route is effective in delivering cocaine to the CNS, though the drug may take longer (30 min) to be absorbed and to reach peak plasma levels (50 to 90 min). Intravenously, cocaine induces pleasant feelings rapidly (e.g., within two minutes), with increases in blood pressure and heart rate. Smoking coca paste, a mixture of cocaine sulfate, coca alkaloids and organic solvents, at doses of 10 to 25 g per session, is popular among the urban youth of Peru, Colombia and Ecuador. By this means intense euphoria is achieved at first, but almost at once dysphoria occurs along with craving for more paste. If large amounts are consumed, such adverse effects as anxiety, insomnia, tremors, tachycardia, hypertension and dilated pupils will arise. Some authors have also reported personality changes; depression; visual, auditory and tactile hallucinations; and paranoid psychosis. This latter problem frequently cannot be solved without psychiatric hospitalization. Criminal behaviour, alienation from family life, personal neglect and job loss are often associated with chronic paste smokers as well. Tolerance and withdrawal syndrome have not been demonstrated, but there is some evidence of reverse tolerance (i.e., increased reaction to same dose with repeated exposure). The authors recommend further investigation on all aspects of cocaine abuse and express regret that the ideal solution to all cocaine-related problems (i.e., total abstinence by all) is not realistic.

262 Warner, W.H.
COCA IN ALCOHOLISM.
Therapeutic Gazette 2(3): 91, 1881.

E. - case rep. - human - male - adult - treatm. - stim. - Erythrox. coca - morph. - alcohol

The condition of a very heavy drinker who suffered from angina pectoris improved remarkably with doses of fluid extract of Erythroxylon coca. Interestingly, the coca entirely eliminated the patient's desire for alcohol.

263 Washton, A.M., Gold, M.S. and Pottash, A.C.
INTRANASAL COCAINE ADDICTION.
Lancet ii(8363): 1374, 1983.

E. - survey - human - male - female - adult - user - White - chronic - inhal. - intranasal - toxicity - treatm. - price - seizure - brain - depression - coma - stim. - dysphoria - concent. - memory - sleep - lethargy - suicide - paranoia - crim. behav. - irritability - mult. drug use - sex. behav. - nose - addiction - withdrawal - habit - age - death - USA - tranq. - alcohol - heroin

Three hundred and six subjects (198 male, 108 female) were interviewed over the telephone concerning their intranasal use of cocaine. The mean age was 28 yr; most were White and employed, and had used cocaine for four years. Average amount spent on the drug per week was $450. Over half considered themselves addicted in that they could not be comfortable without cocaine and experienced depression upon withdrawal for more than one month. Criminal activity and adverse health consequences such as insomnia, nosebleeds, and irritability were not uncommon. The results of these interviews indicate that the dangers of intranasal cocaine abuse should not be downplayed.

264 Washton, A.M. and Tatarsky, A.
ADVERSE EFFECTS OF COCAINE ABUSE.
In: Harris, L.S. (ed.), Problems of Drug Dependence, 1983. Vol. 49. Rockville, MD: National Institute on Drug Abuse, 247-254, 1984.

E. - bk. - survey - human - male - female - adult - user - heavy user - acute - chronic - inhal. - intranasal - i.v. inject. - toxicity - treatm. - epidem. - law - price - CNS - tremor - seizure - epilepsy - coma - depression - stim. - sub. change - psychol. - concent. - memory - psychiat. - panic - anxiety - paranoia - dysphoria - aggress. behav. - suicide - homicide - lethargy - sleep - hyperact. - crim. behav. - prog. drug use - mult. drug use - irritability - delusions - affect - confusion - psychosis - aud. halluc. - vis. halluc. - tact. halluc. - sex. behav. - nausea - vomiting - nose - vision - tolerance - dependence - compulsion - psych. dep. - physical dep. - wt. loss - death - age - marihuana - tranq. - alcohol - heroin

The use of cocaine has escalated at an alarming rate in the USA over the past few years, spreading among the middle and working classes as well as the wealthy. There was a 200% increase in cocaine-related deaths and emergency admissions and a 500% increase in admissions to treatment programmes for cocaine abuse between 1976 and 1981. These percentages belie the popular image of cocaine as a benign recreational drug. A telephone hotline was set up for cocaine abusers and received over 2000 calls in the first eight weeks. Extensive interviews were conducted with 55 callers who tended to be male (78%); about 33 yr old (range 29-59 yr); White (56%); white-collar, professional or self-employed (53%); and intranasal users (51%). The amount of money spent per week on cocaine ranged from $100 to $3150, with a mean consumption of 8.2 g/wk. Psychological addiction was admitted to by 92% of responders, with a large percentage (80%) wishing they could give it up. The vast majority reported some physical, interpersonal and psychological problems resulting from the drug. Cocaine-related automobile accidents were reported by 6%. A table is presented with a list of the major complaints in order of frequency, such as exhaustion, sleep disturbance, nosebleed, tremor, weight loss, headache, nausea, cough, seizure and coma; paranoia, panic, violence, hallucinations, suicidal ideation and suicide attempts; irritability, depression, anxiety, laziness, low sex drive, confusion and poor memory. Most of the callers were not otherwise involved with drugs, and expressed surprise at the rapid development of their compulsive cocaine use. The authors speculate that the number of individuals who use cocaine and experience problems because of it may be far greater than supposed, since many do not seek help in conventional drug clinics. They predict a noticeable increase in adverse effects in the near future and recommend further research "to combat the current epidemic of cocaine abuse in the U.S."

265 Weil, A.T.
THE GREEN AND THE WHITE.
Journal of Psychedelic Drugs 7(4): 401-413, 1975.

E. - gen. disc. - human - inhal. - intranasal - i.v. inject. - oral - toxicity - hist. of coc. - law - price - depression - stim. - affect - aggress. behav. - psychosis - teeth - stom. - liver - kidneys - respir. - blood - tolerance - dependence - phys. dep. - psych. dep. - USA - S. Am. - Europe - coca leaf - heroin - opium

In a series of four very discursive letters, the author explains his opinion about the importance of distinguishing between cocaine, the white powder, and coca, the green leaf. The most important differences are as follows: (1) Cocaine is expensive (up to $100/g whereas coca leaf is not. (2) Cocaine is usually snorted or taken i.v., whereas coca leaves are chewed. (3) Cocaine is usually adulterated, possibly with amphetamines, where as coca leaf is not. (4) Coca leaf chewing among South American Indians is compatible with good health, sociability and longevity, whereas cocaine sniffing can lead to dependence, tolerance, and other adverse effects in North American recreational users.

The author describes his personal experience with both substances in some detail, and discusses their legal and pharmacologcal history. Among other virtues, coca can aid digestion; maintain teeth and gums in good condition; give energy; improve mood; and cure stomach ache.

266 Weil, A.T.
WHY COCA LEAF SHOULD BE AVAILABLE AS A RECREATIONAL DRUG.
Journal of Psychedelic Drugs 9(1): 75-78, 1977.

E. - gen. disc. - human - inhal. - intranasal - oral - top. admin. - anesth. - toxicity - therap. use - chem. - hist. of coc. - law - price - stim. - tolerance - addiction - withdrawal - wt. loss - death - USA - S. Am. - Peru - Europe - coca leaf - cannabis - heroin - opiates - amph.

The author criticizes the laws against recreational cocaine use which is widespread in the US today. After a brief review of the history of the drug, including its early use by South Americans and Europeans, he notes that most deaths associated with cocaine have taken place in a medical rather than social setting. The intranasal intake of this expensive, usually adulterated, drug bears little resemblance to the chewing of coca leaves which is a safe, natural practice. Since it would be next to impossible to curtail the use of cocaine, an alternative solution to the problems associated with abuse could be to encourage coca leaf mastication. In chewing-gum form, this mild stimulant would facilitate social interaction, weight loss and physical fitness. Its subtle psychoactive effects would be more desirable to society than the strong high produced by other stimulants. Society could learn a lesson from the Incans who recognized the coca leaf as a gift "sent from heaven to improve our lives."

267 Wesson, D.R. and Smith, D.E.
COCAINE: ITS USE FOR CENTRAL NERVOUS SYSTEM STIMULATION INCLUDING RECREATIONAL AND MEDICAL USES.
In: Petersen, R.C. and Stillman, R.C. (eds.), Cocaine: 1977. Rockville, MD: National Institute on Drug Abuse, 137-152, 1977.

E. - book - rev. - human - male - female - adult - user - inhal. - intranasal - oral - i.v. inject. - top. admin. - anesth. - toxicity - therap. use - treatm. - o.d. - price - CNS - seizure - coma - resp. depr. - brain - depression - stim. - pain - psychiat. - anxiety - paranoia - euphoria - crim. behav. - mult. drug use - irritability - interper. rel. - psychosis - aud. halluc. - vis. halluc. - cardiovasc. - sex. behav. - dependence

- psych. dep. - withdrawal - USA - S. Am. - Peru - coca leaf - dr. comp. amph. - dr. int. heroin - dr. tr. diaz. - alcohol - barb. - cannabis

Cocaine use is increasing in the US, notably among middle-class professionals who are a far cry from the drug-user stereotype. The cost of this readily available drug ranges from $500-$1500/oz or $60 - $100/g. It is estimated that anywhere from 0-200 mg is consumed in an average single dose. Establishing a maximum safe dose is difficult because of individual variations in sensitivity to the drug. Cocaine and amphetamines are classified as CNS stimulants and either may produce such adverse effects as depression, psychological dependence, anxiety and psychosis. Routes of administration commonly used for cocaine are oral (mainly in South America); intranasal (called snorting); i.v. injection (possibly in combination with heroin); and absorption through mucous membranes (such as the gums). Four case reports are given to illustrate different problems arising from cocaine use such as depression, anxiety, irritability, interpersonal conflicts, rapid pulse, hyperventilation, financial loss, seizures, coma, psychosis, auditory and visual hallucinations, paranoia and the urge to repeat the experience regardless of a desire to quit. Some regard the depression experienced by users during abstinence as a type of withdrawal state. Even though the known incidence of cocaine abuse is still relatively small, there is reason to suspect that the actual incidence is much higher than research reveals - mainly because most cocaine users are determined to keep heir habit a secret. Overdose episodes resulting from a combination of heroin and cocaine can be difficult to manage. As a therapeutic agent in the treatment of depression, cocaine may have limited value, as well as in the relief of severe pain. In conclusion, cocaine has a moderately high abuse potential like that of the amphetamines, and cannot realistically be described as a harmless drug.

268 Wesson, D.R.
COCAINE USE BY MASSEUSES.
Journal of Psychoactive Drugs 14(1-2): 75-76, 1982.

E. - interview - human - female - adult - user - acute - chronic - i.v. - toxicity - depression - stim. - paranoia - anxiety - sleep - irritability - mood - heart - sex. behav. - impotence - aphrodisiac - hepatitis - dependence - physical dep. - psych. dep. - addiction - USA - marihuana - methaqualone - alcohol - opiates

Ten masseuses from the San Francisco Bay Area were interviewed concerning their use of cocaine with customers and sexual partners. Cocaine was discovered to be a common medium of barter, though most masseuses wanted at least some of the payment in cash. Some men became impotent after cocaine use and overestimated their sexual energy. Cocaine could enhance physical pleasure with a lover but had no favourable effect on a customer. In fact, its tendency to delay ejaculation was regarded as an annoyance because of the lengthened massage time. The effect of cocaine on sexual activity is compared to that of amphetamine, i.e., desire is increased but performance is weakened. Some chronic users exhibit compulsive masturbation and sexual binges. Rather than for its aphrodisiac properties, the masseuses valued cocaine for its ability to keep them awake all night and to buoy up their mood during massage. Occasionally it could cause anxiety and insomnia, in which case alcohol, methaqualone, marihuana or opiates would be used as a remedy. Other adverse effects included hepatitis (from i.v. use), paranoia, depression and heart palpitations. Most of the individuals interviewed considered cocaine to be addictive and advised others to avoid it. Their own consumption was regarded not as a sign of dependence but as part of coping with their work.

269 Wetli, C.V. and Wright, R.K.
DEATH CAUSED BY RECREATIONAL COCAINE USE.
Journal of the American Medical Association 241(23): 2519-2522, 1979.

E. - clin. pap. - human - male - adult - user - Black - White - acute - inhal. - intranasal - oral - i.v. inject. - top. admin. - anesth. - toxicity - treatm. - law - price - CNS - seizure - convuls. - reac. time - resp. depr. - coma - euphoria - suicide - homicide - motiv. - crim. behav. - mult. drug use - g.i. - blood - urine - nose - pulm. ed. - hemorrhage - tolerance - reverse tol. - death - age - autops. - USA - S. Am. - heroin - barb. - alcohol - amph. - methadone - diaz. - methaqualone - lidocaine

The popular idea that cocaine is a harmless recreational drug can be demonstrated to be false. Out of 68 deaths involving cocaine studied by the Medical Examiner's Office of Dade County in Florida between 1969 and 1978, 24 proved to be directly due to cocaine toxicity. Intravenous injection led to rapid respiratory depression and death, whereas oral or nasal ingestion resulted in an hour of no symptoms followed by generalized seizures and death. The vicitms' average age was 26 yr; most were white males. Intranasal and i.v. use was motivated by desire for euphoria, but oral ingestion was usually resorted to in an effort to conceal the drug from law enforcement officials. All cases showed evidence of pulmonary edema (accumulation of watery fluid in lungs), visceral congestion and serosal petechiae (hemorrhagic spots on membrane tissues). Interestingly, no case had the perforated nasal septum often thought to result from cocaine snorting. A general discussion follows in which the average purity (25%-50%) and price ($65 - $100/g) of street cocaine are noted, as well as the recent trend in abuse by middle-class professionals. Lethal dose varies greatly among different human beings, but 500 mg taken orally has been shown to kill 50% of test cases. A distinguishing feature of cocaine is that nonfatal acute reactions tend to be minor (i.e., do not need treatment), whereas serious reactions tend to lead to rapid death unless emergency procedures are available at once. In conclusion, there is no basis for the opinion that this drug is innocuous.

270 Wisotsky, S.
EXPOSING THE WAR ON COCAINE: THE FUTILITY AND DESTRUCTIVENESS OF PROHIBITION.
Wisconsin Law Review 6: 1305-1426, 1983.

E. - rev. - human - acute - chronic - inhal. - intranasal - inject. - therap. use - law - price - CNS - behav. - stim. - euphoria - homicide - crim. behav. - prog. drug use - heart rate - blood press. - sex. behav. - dependence - compulsion - death - USA - S. Am. - free-base - dr. comp. amph. - dr. comp. alcohol - dr. comp. cannabis

As the title suggests, this paper has more to do with the law than with the health aspects of cocaine use. Nevertheless, in the midst of a very detailed discussion and analysis of the law, the author does make a few remarks about public health consequences related to cocaine. For example, he criticizes the North American tendency to tolerate and even encourage the abuse of such blatantly harmful drugs as tobacco and alcohol while waging a relentless, expensive, and relatively ineffective war against cocaine. The risks of long-term cocaine use are not known, he says, because of lack of research (especially before 1974), but the risks of tobacco and alcohol abuse are well-documented and extremely serious. Therefore, it is illogical for society to be spending huge sums of money and energy to repress cocaine while accepting these other drugs. The effects of cocaine vary enormously depending on dose, frequency of use, and route of administration. Nasal inhalation, the most common method of intake, does not deliver as high a blood plasma level as injection or free-basing (i.e., smoking the purified hydrochloride). Although infrequent use is unlikely to cause much harm, there is a tendency for infrequent users to become frequent and even compulsive users, despite efforts to maintain moderation. The pharmacological effects of increased heart rate and blood pressure are compared to changes produced by mild physical exertion and are called "relatively benign." Sigmund Freud described the psychological effects as exhilaration, lasting euphoria, excitement and increased vigor and self-control. As a CNS stimulant like the amphetamines, cocaine can be used to improve the performancce of athletes. Compulsive abusers are in the minority (10%-20%), but they do find themselves caught up in an expensive habit which often leads to dangerous criminal activity. The author concludes that the present laws are ineffective and simplistic but that they are unlikely to be changed in the near future.

271 Wolff, P.J.O.
QUELQUES CONSIDERATIONS SUR LA COCA EN AMERIQUE DU SUD.
[Some Considerations on Coca in South America.] (Fre)
Schweizerische Medizinische Wochenschrift 70: 606-609, 1940.

This paper is similar to another published elsewhere by the same author.

For annotation see: Citation 272

272 Wolff, P.O.
PROBLEMS OF DRUG ADDICTION IN SOUTH AMERICA.
British Journal of Addiction 46: 66-78, 1949.

E. - gen. disc. - human - acute - chronic - oral - cognit. - percep. - time percep. - psychol. - paranoia - euphoria - homicide - lethargy - crim. behav. - hyperact. - halluc. - aud. haluc. - vis. halluc. - mania - sex. behav. - dev. abnorm. - hunger - habit - age - S. Am. - Peru - Bolivia - Argentina - Colombia - coca leaf

The habit of chewing coca leaves is found not only in Peru and Bolivia, but also in some parts of Colombia and Argentina. The practice constitutes a medical and social problem which compounds other evils such as poverty and malnourishment. Occasional chewing is not harmful but once it becomes habitual this practice can be debilitating in the extreme. Chewing is usually motivated by a desire to relieve hunger, increase physical strength, and experience euphoria. The effects sometimes take the form of frenzied activity and megalomania (delusions of grandeur). The author believes that coca chewing would not be necessary to cope with high-altitude stress if the chewers had a proper diet. Mental effects include altered perceptions; visual and auditory hallucinations; paranoia; obsessions; and disordered thinking. Coca chewing contributes to the problem of a very low intelligence quotient among aboriginal races, and also results in apathy, laziness and flattened affect (i.e., rare emotional responses). Moreover, lack of intelligence is passed on to the children of habitual chewers. Moral degeneration is witnessed by criminal acts including homicide. Unless the habit is suppressed, the backwardness and misery of native South Americans will continue.

273 Woods, J.H. and Downs, D.A.
THE PSYCHOPHARMACOLOGY OF COCAINE.
In: Drug Use in America: Problem in Perspective.
Washington: U.S. Gov't. Printing Office, 116-139, 1973.

E. - rev. - human - animal - cat - rabbit - rat - mouse - Black - White - acute - chronic - inhal. - intranasal - oral - s.c. - i.v. - inject. - i.m. - dose/resp. - top. admin. - anesth. - toxicity - therap. use - treatm. - hist. of coc. - price - CNS - tremor - reac. time - resp. depr. - brain - fainting - symp. NS - convuls. - stim. - subj. change - anxiety - paranoia - euphoria - crim. behav. - mult. drug use - halluc. - aud. halluc. - vis. halluc. - tact. halluc. - personality disint. - cardiovasc. - tachycard. - card. arrest - pallor - respir. - pulm. ed. - sex. behav. - aphrodisiac - skin - sweating - eye - mydr. - cell membr. - tolerance - dependence - phys. dep. - withdrawal - body temp. - death - emaciation - USA - Europe - S. Am. - coca leaf - dr. comp. amph. - dr. tr. barb. - dr. int. heroin - alcohol - marihuana

A recent trend in greater use of cocaine has kindled public interest in the drug. Historically coca leaves were chewed by aristocrats in pre-Spanish Peru and later by all different classes. Sigmund Freud publicized the drug in Europe in the late 1800s, praising its ability to produce a cheerful mood and physical stamina. At first he recognized no potential for addiction, but eventually had to retract this view when a colleague of his began to suffer from adverse effects due to chronic use. Many persons originally became dependent because of therapeutic use which developed into personal use for gratification. In the United States the cocaine habit has often been associated with Blacks who at one time were rewarded with cocaine for heavy labour. Cocaine can be administered i.v., orally, i.m., s.c., intranasally and topically, the i.v. route delivering the highest blood levels and therefore the most rapid behavioural effects. A potent CNS stimulant, cocaine produces psychic changes and sometimes convulsant toxicity. Its cardiovascular effects are dose-related: small doses may slow the heart down; moderate doses, speed it up; and high doses, cause it to stop altogether. Similarly, moderate amounts tend to increase respiratory rate whereas large amounts can lead to respiratory depression. Mydriasis or pupil dilation and elevated body temperature are also associated with cocaine use. Death due to cocaine toxicity is usually rapid, characterized by CNS stimulation, cardiorespiratory collapse, convulsions and fainting. Non-fatal poisoning can result in restlessness, delirium, hallucinations, tremors, pallor, cyanosis, tachycradia, pulmonary edema (accumulation of fluid in lungs), and profuse sweating. It is possible that the frequency of death caused by recreational cocaine abuse is higher than reported, partly because a co-administered drug such as heroin may be erroneously blamed for the fatality. The euphoria which most abusers seek has been described as enormously pleasurable, including feelings of heightened mental and physical powers, greater courage, and sexual arousal. "Cocaine bugs" is a term referring to the tactile hallucination of insects crawling beneath the skin. There is no denying that abusers of this drug often show signs of physical and mental deterioration (e.g., broken marriages, poor work records, emaciation), yet to infer a cause-and-effect relationship between the drug abuse and the stated problems may be simplistic. Tolerance and physical dependence have not been documented. Costing about $5 for an 80 mg bag on the street, cocaine is usually adulterated to the point that only 5% of this quantity is likely to be pure drug (i.e., 4 mg). Despite reports of a recent increase in abuse, cocaine is still less commonly used than alcohol, heroin, amphetamines, barbiturates and marihuana.

274 Wright-St. Clair, R.E.
POISON OR MEDICINE?
New Zealand Medical Journal 71: 224-229, 1970.

E. - gen. disc. - human - oral - i.v. inject. - anesth. - therap. use - hist. of coc. - CNS - depression - stim. - euphoria - delirium - eye - spine - mult. drug use - anorexia - addiction - S. Am. - Germany - USA - coca leaf - Erythrox. coca - heroin - morphine - LSD - tobacco - opium - curare - ergot

The history, therapeutic uses and negative effects of opium, cocaine, curare and ergot are discussed. Cocaine, though not as popular as heroin, morphine or LSD, is still considered an important addictive drug and is often combined with heroin. The chewing of the leaves of Erythroxylon coca originated in South America. The effects of this practice can include CNS stimulation followed by CNS depression, euphoria, increased energy, delirium and ataxia (incoordination). Habitual chewers are noted for apathy and lack of will-power. Cocaine's anesthetic properties were formally recognized in 1872 and were subsequently exploited in such procedures as eye and spinal surgery.

275 Zapata Ortiz, V.
THE PROBLEM OF THE CHEWING OF THE COCA LEAF IN PERU.
Bulletin on Narcotics 4(2): 26-33, 1952.

This paper is similar to another published by the same author, except for the additional discussion of coca chewing related to high altitude stress.

For annotation see: Citation 276

276 Zapata-Ortiz, V.
THE CHEWING OF COCA LEAVES IN PERU.
International Journal of the Addictions 5(2): 287-294, 1970.

E. - gen. disc. - human - dog - male - female - daily user - acute - chronic - oral - parenteral - toxicity - hist. of coc. - cognit. - percep - psychol. - concent. - blood press. - pulse - hunger - g.i. - respir. - urine - habit - addiction - age - body temp. - S. Am. - Peru - coca leaf - alcohol

After the conquest of Peru by the Spaniards, coca leaf chewing was no longer restricted to the aristocracy who had used it mainly during official ceremonies. The practice became widespread enough, in fact, to produce evidence of 100,000 baskets of leaves consumed in 1583. Motivations for the habit at that time included hunger, the need for physical stamina at work, the desire for a feeling of well-being, and profit. Today estimates of numbers of persons addicted to coca in Peru and Bolivia suggest abut 6,000,000. Average accumulated daily consumption ranges from 30-50 g, taken three or four times throughout the day. Use may begin at 12 yr of age and generally continues throughout a lifetime. The habit of chewing leaves is different from what is commonly referred to as "cocaine addiction" in that the effects are milder, longer-lasting, and seldom associated with toxicity. Physiological effects of leaf mastication include an increase in pulse, blood pressure, respiratory rate and muscle reflexes. The subject builds up resistance to the discomforts of fatigue, hunger and cold. Although there is no doubt that coca chewers in general have poor health, it is difficult to ascertain how much of the problem stems from this habit or from other influences such as alcoholism, malnutrition, and inadequate hygiene. Chewers also demonstrate low intelligence quotients, particularly in the ability to perform abstract reasoning. Intellectual impairment in children is reversible if the habit is stopped. Users often exhibit such personality traits as apathy, short attention span and maladjustment. In summary, coca chewing is a dangerous habit which should be eradicated.

277 Zentner, J.L.
COCAINE: ITS HISTORY, USES AND EFFECTS.
Journal of Psychedelic Drugs 7(3): 313-315, 1975.

E. - bk. rev. - human - Black - toxicity - treatm. - hist. of coc. - law - paranoia - anxiety - halluc. - aphrodisiac - tolerance - withdrawal - addiction - death - USA - alcohol - LSD - heroin - opiates

The author give a favourable review of the book Cocaine: Its History, Uses and Effects by R. Ashley (New York: St. Martin's Press, 1975). Based on cocaine's revived popularity in recent years, the book contains criticisms of drug experts who ignore facts which do not fit in with what they want to believe. Like alcohol, all illicit drugs should be legalized and controlled. Cocaine is not addictive, does not produce tolerance and is not associated with a withdrawal syndrome. Most of the reported adverse reactions like paranoia, hallucinations and death are founded on "hearsay" and are greatly exaggerated. In fact, the main reason for its bad reputation in the US is that of its early association in the public mind with Blacks who were regarded as a suspicious minority group. In this book cocaine is demythologized and the bureaucracies controlling it are exposed as power-seeking and corrupt. It is admitted that if an individual exceeds his limit, he will experience such difficulties as anxiety, insomnia, paranoia and hallucinations. Despite its tone of contempt for drug experts, the book is recommended to social historians, sociologists and laymen.

AUTHOR INDEX

Acker, D. 1
Adriani, J.A. 2
Allen, C.J. 3
Allred, R.J. 4
Altshuler, H.L. 5, 6
Anderton, J.M. 1
Andrade, J.H. 51
Aniline, O. 8
Anonymous 9-30
Antonil [No initial] 48
Aramayo, G. 31
Arango, A. 247
Aschaffenburg, G. 32
Ashley, R. 248, 277
Astrachan, B.M. 33
Atkinson, C.A. 145
Avorn, J.L. 35

Bakalar, J.B. 8, 134-8
Barash, P.(G.) 36, 64, 65, 257, 259, 260
Barros, R.E. 51
Bar-Or, D. 37
Bartall, H. 44
Bartholow, R. 38
Bednarczyk, L.R. 39
Bejarano, J. 40, 41, 42
Bejerot, N. 43
Benchimol, A. 44
Benowitz, N.L. 181, 197
Bentley, W.H. 45
Berman, A.R. 157
Bettinger, J. 46
Bewley, J. 47
Bishop, P.E. 48
Blejer-Prieto, H. 49
Boltax, S. 33
Bolton, R. 50
Borghelli, R.F. 51
Bose, C. 52
Bose, K.C. 53
Bower, B. 54
Brill, H. 239
Bristow, W.J. 55
Brodsky, J.B. 56
Brown, G. 233
Brust, J.C.M. 57
Buck, A.A. 58, 59
Budd, R.D. 60
Burch, M.R. [also published as "N.R."] 5, 6
Burchard, R.E. 61
Busis, S.N. 62
Byck, R. 63, 64, 65, 188, 257-61

Cagliotti, C.N. 66
Caldwell, J.(J.) 67, 68
Campbell, D. 2
Carbajal, C. 69, 153, 155
Cárdenas, M. 70
Carey, J.T. 71
Centofanti, M.H. 51
Chambers, C.D. 72, 251
Chapple, P.A.L. 174
Chopra, I.C. 73
Chopra, R.N. 73
Claude, H. 74
Cleckner, P.J. 75
Cohen, J.A. 220
Cohen, S. 76
Collier, H.O.J. 77
Comby [No initial] 78
Contel, N.R. 207
Cooper, C.B. 79
Core, F.G. 80
Corrin, B. 79
Cravey, R.H. 173
Creese, I. 207
Crittenden, A. 81
Cronson, A.J. 82, 83
Crothers, T.D. 84
Crowley, T.J. 85, 145
Cushman, P., Jr. 137

Davis, J.M. 170
de Goddard, S.N. 127-128
de Jussieu, J. 41, 49
Dembo, R. 251
Demuth, R.J. 167
de(l) Pozo, T. 153-5
Desser, K.B. 44
de Takáts, G. 86
Di Maio, V.J.M. 87
Di Palma, J.R. 88
Domic, Z. 89
Dossett, R.G. 5, 6
Downs, D.A. 273

DuPont, R.L. 136

Earnest, M.P. 190
Eddy, N.B. 90, 91
Egan, D.J. 92
Einstein, S. 123
Eiswirth, N.A. 93
Ellinwood, E.H., Jr. 64, 100, 213, 258
Erlenmeyer [No initial] 138
Eysenck, H.J. 94

Fairbanks, D.N.F. 95
Fairbanks, G.R. 95
Feldman, R.S. 171
Fennell, W.H. 96, 99
Fernandez, M. 153-5
Filipenko, J.D. 193
Finkle, B.S. 97, 98
Fischman, M.W. 96, 99-106, 170
Fishbain, D.A. 37, 107, 108
Flemenbaum, A. 82, 83
Forno, J.J. 109
Forti, L. 216
Fränkel, F. 156
Freedman, D.X. 99, 110
Freud, A. 188
Freud, S. 8, 28, 31, 81, 92, 93, 94, 95, 109, 111-3, 122, 134, 138, 139, 150, 182, 188, 206, 219, 239, 245, 259, 261, 270, 273

Gade, E.M. 114
Garcés, G. 115
Gardner, R. 116
Garland, O.H. 117
Garriott, J.C. 87, 173
Gawin, F.H. 118
Gay, G.R. 27, 119-125, 209-11
Gillin, J.C. 204
Glatt, M.M. 126
Goddard, D. 127-8
Gold, M.S. 263
Goldstein, A. 136
Goldwyn, R.M. 56
Gonzales-Carrero, A. 129
Goodwin, F.K. 130, 204
Gould, L.C. 131
Gould, W.M. 255
Granier-Doyeux, M. 132
Gray, G.H. 133
Gressman, E.A. 39
Grinspoon, L. 8, 134-8
Gunderson, E.K.E. 191
Gupta, R.C. 196
Gushue, G.F. 122

Haddad, L.M. 139, 140
Halback, H. 90, 91
Halstead, W.S. 188
Hamner, J.E. III 141
Hanna, J.M. 142
Hanson, A. 143
Harris, L.S. 103, 145, 264
Hartmann, H. 144
Helfrich, A.A. 145
Henderson, P.R. 146
Henderson, R.L. 157
Hewer, C.L. 147
Hewitt, J.J. 58, 59
Heyderman, E. 79
Higier, H. 148
Hirschman, A. 230
Hole, J.W. 149
Horberg, L.K. 150

Inaba, D.S. 119-22, 209-11
Isbell, H. 90, 91, 151, 152

Jatlow, P. 64, 65, 257, 259, 260
Javaid, J.I. 170
Jerí, F.R. 31, 35, 65, 66, 69, 102, 129, 153-5, 228, 256
Joel, E. 156
Johns, M.E. 157
Jonsson, S. 158
Jordan, N. 159

Kalant, O.J. 160, 161
Kane, F.J., Jr. 162
Kegley, C.F. 163
Khantzian, E.J. 85, 164, 165
Kilbey, M.M. 64, 100, 213, 258
Kilham, C.S. 166
Klabacha, M.E. 167
Kleber, H.D. 118, 131
Knotts, G.R. 252
Kolb, D. 191
Kolb, L. 55, 168
Kosman, M.E. 169
Kotin, J. 130
Krasnegor, N.A. 99, 100

Lesko, L.M. 170
Lester, J.L., III 247
Levitt, C. 109
Liban, C. 233
Lichtenfeld, P.J. 171
Lipsius, L.H. 172
Lowinson, J.H. 137
Lundberg, G.D. 173, 196

MacRae, A.A. 58, 59
Magnan, [No initial] 226
Maier, [H.] 229
Malcolm X 207
Mancilla, A. 129
Mantegazza 111, 207, 226, 261
Marks, V. 174
Masi, R.J. 175
Masserman, J.H. 150
Mattison, J.B. 176-8
Mayer, E. 179
McCloskey, K.L. 97, 98
McIntyre, A.R. 180
McKinney, H.E. 181
McLaughlin, G.T. 182
M'Donald, D.H. 183
Mello, N.K. 261
Merion, P.L. 125
Michelson, J.B. 184
Miller, S.H. 167, 185
Millman, R.B. 137, 186
Moffett, A.D. 72
Monge, C. 187
Montgomery, S.H. 196
Moreno, T. 230
Mulé, S.J. 239
Mullaly, R.M. 172
Murphree, H.B. 188
Murphy, H.B.M. 189, 194
Myers, J.A. 190

Nail, R.L. 191
Nakamura, G.R. 192
Nanji, A.A. 193
Nassar, W.Y. 7
Negrete, J.C. 189, 194, 195
Newmeyer, J.A. 119-21
Nieman(n), A. 41, 49
Noguchi, T.T. 192

O'Connor, G.R. 184
O'Donnell, J. 136
Olivares, G.J. 196
Olson, K. 197
O'Meara, M. 158

Palmer [No initial] 11
Palmer, E.R. 198
Pav, J.M. 167
Pearman, K. 199
Peckham, G.F. 200
Pentil, P. 197
Pérez Alcalá, R. 201
Perkner, J.J. 122
Perry, D.C. 202
Petersen, R.C. 36, 63, 97, 98, 203, 225, 267
Petruscak, J. 237
Pillsbury, R.C. 157
Post, R.D. 145
Post, R.M. 130, 204-7
Pottash, A.C. 263
Price, J.C. 157
Price, K.R. 208
Pruet, C.W. 244

Rajfer, S. 106
Rappolt, N.R. 209-11
Rappolt, R.T. 122, 209-11
Ravin, J.G. 212

Ravin, L.C. 212
Resnekov, L. 96, 99
Resnick, R.B. 213
Reynolds, P.C. 173
Richter, R.W. 57
Ridpath, R.F. 214
Rios, O. 189
Rubin, D.B. 171
Ruby, M. 81
Russell Taylor, W.J. 72

Sabbadini, A. 216
Sachs, B.P. 1
Sanchez, C.C. 153-5
Sãnchez, M. 30
Sasaki, T.T. 58, 59
Saury [No initial] 226
Sawicka, E.H. 215
Schatzman, M. 216
Schecter, A.J. 83
Schnoll, S.(H.) 150, 217
Schraff [No initial] 49
Schultz, C.B. 218
Schultz, M.G. 219
Schuster, C.R. 96, 99-106
Schwartz, K.A. 220
Schwartz, L.K. 213
Schwartz, P. 221
Scott, M.E. 172
Sedan, J. 222
Seevers, M.H. 90, 91, 250
Senay, E.C. 223
Sever, P.S. 67
Shaw [No initial] 74
Shaw, R.F. 173
Sheppard, C.W. 119-21
Shick, J.F.E. 99
Shontz, F.C. 71, 114, 243
Shulgin, A.T. 224
Siegel, R.K. 225-30
Sillen, A. 231
Siomopoulos, V. 232
Smart, R.G. 233
Smith, D.E. 93, 234, 235, 267
Smith, J.W. 110, 236
Smith, R.B. 237
Snipes, J.A. 238
Snyder, S.H. 239
Solĩz, A. 240
Sollier, P. 241
Sonnenschein, R. 242
Spotts, J.V. 71, 114, 243
Stark, D.V. 244
Stark, T.W. 244
Stevens, A. 245
Stevenson, R.L. 219
Stillman, R.C. 36, 63, 97, 98, 225
Stimmel, A.F. 246
Stirparo, M.A. 51
Stone, N. 159
Suarez, C.A. 247
Swett, C., Jr. 248

Taggart, R. 249
Tatarsky, A. 264
Tatum, A.L. 250
Taylor, T.W. 162
Taylor, W.J.R. 251
Thomas, J.A. 163, 252
Thornton, E.M. 94, 245, 253
Tice, F. 254
Tracey, K.J. 1
Trosser, A. 215

Ungerer, J. 259, 260
Ungerleider, J.T. 256
Unna, K.R. 169

Van Dyke, C. 63, 64, 65, 257-61
Villegas, O.L. 141

Wahby, L. 37, 108
Wales, H.W. 182
Ward, G.A. 49
Warner, W.H. 262
Washton, A.M. 263, 264
Weil, A.T. 265, 266
Wesson, D.R. 93, 235, 267, 268
Wetli, C.V. 37, 107, 108, 269
Whitcher, J.P. 184
White, W.M. 151
Whitehead, P.C. 127-128
Wilson, S. 184

Winchester, J.F. 140
Wise, W.E. 1
Wisotsky, S. 270
Wolff, P.[J.]O. 271, 272
Woods, J.H. 273
Wright, R.K. 269
Wright-St. Clair, R.E. 274
Wyatt, R.J. 204
Wymer, R.L. 39

Young, J.B. 158
Young, R.T. 109

Zapata Ortiz, V. 275, 276
Zentner, J.L. 277

SUBJECT INDEX

abdomen 46, 88
aberrations 156
  sexual 239
abnormality(ies) 53, 85, 102, 104, 174
abolition, coca chewing 3, 50
abruptio placentae 1
abscess(es) 161, 186
absorption 157, 185, 199, 201, 239, 259, 267
  rapid 2, 36, 86, 93, 163
  rate 7, 63, 124, 243
  re- 81
abstainers 189
abstinence 17, 32, 43, 73, 85, 93, 118, 164, 189, 199, 206, 222, 267
  syndrome 35, 169
  total 261
abuse(r) 234
  alcohol 195, 270
  amphetamine 99, 100, 110, 118, 235, 236, 257
  cocaine 17, 29, 35, 44, 57, 67, 72, 74, 85, 87, 88, 95, 97-100, 102, 109, 110, 118, 122, 124, 137, 140, 144, 145, 150, 152, 163, 164, 169, 174, 175, 177, 178, 184, 190, 192, 199, 206, 234, 236, 239, 244, 251, 255, 256, 261, 263, 264, 267, 269, 270, 273
  drug
    see drug, abuse
  heroin 72, 126, 174, 184
  LSD 184
  morphine 17
  narcotics 203
  polydrug 131
  potential
    see potential, abuse
  stimulant 164, 246
  substance 261
  tobacco 270
accident(s) 86, 132
  automobile 264
  cerebrovascular 57, 96
acetyl salycilate 73
acid
  barbituric 86
  isonicotinic 162
  lysergic, diethylamide
    see LSD
acidosis 158
action(s) 102, 239, 258
  of cocaine 63, 67, 99, 100, 102, 104, 124, 135, 177, 228, 243
  kidney 177
  toxic 44
activity(ies) 74, 174, 199
  criminal 154, 251, 263, 270
  frenzied 272
  homosexual 156
  "major period" 5
  mental 243
  motor 67, 163
  muscular 81
  nervous 170
  sexual 43, 177, 229, 268
  social 127
  spontaneous EEG 6
acts
  antisocial 90, 91
  criminal 272
  violent 92
adaptation(s) 41, 169, 207, 231
addict(s) 207
  coca 40, 41, 141, 147, 201
  cocaine 17, 21, 41, 47, 52, 53, 73, 151, 167, 169, 175, 177, 206, 208, 222, 239, 250
  heroin 47, 57, 60, 235
  morphine 78, 113
  narcotic 72, 221
  non- 113
  opium 246
addiction(s) 113, 151, 216, 251
  alcohol 45, 83, 139, 177
  amphetamine 43, 110

- coca 40, 41, 51, 61, 70, 187
  - paste 155
- cocaine 12, 17, 20, 21, 32, 35, 43, 47, 49, 55, 66, 70, 73, 81, 94, 113, 118, 126, 151, 152, 176, 177, 184, 225, 241, 263, 264, 273, 276
  - experimental 250
  - /morphine 12, 17, 78, 241
- drug(s) 47, 66, 74, 90, 91, 143, 151, 165, 168, 241, 272
- heroin 47, 83, 126
- hypnotics 83
- morphine 17, 28, 113, 139, 140, 182, 241
- opiate 110, 122
- opium 45, 133, 177, 238
- psychological 139, 140

Addiction Research Center Inventory 260

Addiction Research Foundation of Ontario 102

administration(s)
- amphetamine 63, 104, 169
- coca 66
- cocaine 35, 64, 102, 103, 177, 206, 214, 257
  - chronic 169
  - experimental 101
  - frequent 109
  - internal 38
  - intranasal 63, 65, 69, 95, 139, 203, 213, 214, 227, 228, 241, 256, 257, 259
  - intravenous (i.v.) 65, 87, 99, 100, 103, 135, 164, 173, 199, 203, 205, 213, 234, 252, 267, 273
  - long-term 6
  - means 163
  - nasal 199
  - ocular 212
  - oral 65, 134, 203, 205, 234, 235, 259, 267
  - prolonged 169
  - repeated 207
  - route(s) 26, 29, 47, 57, 63, 65, 66, 69, 92, 95, 97, 98, 124, 134, 139, 140, 143, 145, 151, 152, 157, 161, 167, 169, 173, 181, 186, 192, 206, 213, 214, 216, 227, 228, 234, 241, 244, 261, 267, 270, 273
  - s.c. (subcutaneous) 241
  - self-
    - see self-administration
  - site 124
  - smoked 65
  - therapeutic 177
  - topical 7, 65, 113, 229, 234
  - variables 206
- drug 213, 234
- heroin 214
- lidocaine 260
- lithium 83
- propanolol 210, 211
- stimulant 207

admission(s) 124, 264
- to hospital 4, 39, 44, 46, 47, 57, 72, 107, 140, 193

adolescents 69

adult(s) 94, 196, 233

adulterant(s) 106, 124, 143, 150, 196, 212, 234

adulteration 93, 134, 202

affect, flattened 272

age(s) 32, 41, 42, 47, 58, 59, 64, 72, 73, 178, 189, 192, 195, 201, 203, 207, 211, 226, 263, 276
- mental 66

agent(s)
- beta-blocking 44
- chemical 90, 91
- miscellaneous 252
- therapeutic 267

aggression 69, 154, 218, 243
aggressiveness 31, 229
agitation 32, 37, 107, 158, 205, 235
ailments 49, 140, 150, 178, 215, 219
alarm 113, 132
albumin 58, 59
alcohol 24, 29, 32, 45, 49, 53, 58, 59, 69, 84, 90, 91, 111, 113, 115, 127, 137, 144, 148, 155, 156, 195, 214, 218, 220, 228, 233, 262, 268, 270, 273, 277
  addiction
    see addiction, alcohol
alcoholic(s) 52, 150
alcoholism 15, 68, 74, 83, 109, 122, 127, 174, 245, 262, 276
alertness 109, 139, 140, 171, 207, 239
  over- 76
alienation 261
alkaloid(s) 10, 31, 38, 49, 50, 61, 66, 70, 73, 87, 89, 124, 132, 138, 139, 141, 142, 150, 154, 157, 161, 182, 193, 199, 219, 225, 227, 243, 261
allergy 7, 36, 86
allure 27
altitude, high 3, 41, 50, 89, 132, 169, 187, 195, 261, 272
ambition 41, 243
amenorrhea 144
America 74, 93, 134, 273
Americans 24, 75, 124, 140, 150, 171, 234
amine(s), biogenic 5
amitriptyline 173
amobarbital 46
amphetamine(s) 5, 35, 43, 57, 64, 67, 71, 72, 75, 76, 83, 88, 93, 95, 96, 99-102, 104, 109, 116, 118, 124, 126, 131, 135, 137, 150, 155, 161, 164, 174, 191, 196, 202, 204, 218, 224, 228, 232, 235, 239, 251, 252, 255, 265, 267, 268, 270, 273
  abuse
    see abuse, amphetamine
amylic nitrite 13
analgesic 84, 202
Andes 31, 41, 61, 76
anemia 17, 40, 73, 84 117, 182
anesthesia 7, 16, 56, 67, 85, 161, 171, 179, 229, 230
  general 7
  local 2, 36, 43, 86, 243
anesthetic(s) 13, 16, 22, 23, 25, 41, 49, 76, 81, 95, 124, 147, 157, 163, 173, 177, 185, 188, 203, 216, 258, 261, 274
  local 2, 18, 22, 44, 63, 76, 86-8, 93, 99, 100, 112, 113, 122, 139, 140, 148, 150, 161, 163, 179, 182, 199, 203, 212, 218, 230, 242, 254, 257, 260
  topical 2, 35, 36, 138, 139, 185, 237
aneurysm 171, 220
anger 207, 243
angina 129, 262
animal(s) 35, 90, 91, 99, 100, 104, 105, 157, 169, 207, 216, 225, 226, 236
annoyance 268
anorectic 150
anorexia 52, 53, 89, 99, 100, 102, 109, 129, 150, 152, 154, 155, 176, 177, 178, 207, 213, 227, 243
anorexic 177
anosmia 215
antidepressant(s) 84, 109, 118, 130, 188, 205,

232, 234, 237
antidote 93, 197
  hunger 35
  opium habit 9, 11, 198
ants 170
anus 229
anxiety 29, 31, 32, 43, 55, 76, 93, 102, 109, 112, 129, 130, 135, 137, 152, 154, 155, 168, 173, 186, 196, 199, 205, 206, 218, 227, 228, 235, 243, 248, 261, 264, 267, 268, 277
apathy 41, 70, 141, 206, 229, 272, 274, 276
aphasia 13
aphrodisiac 41, 45, 68, 73, 76, 93, 122, 139, 144, 156, 229, 235, 268
apnea 95, 158
appearance 155
  cocaine 38
appetite 73, 128, 149, 161, 164, 189, 200, 213, 227
  loss 10, 15, 90, 91, 113, 148, 171, 229, 243
    sexual 53
application(s) 93, 157
  intranasal 64, 257, 260
  local 88
  medical 138, 161
  therapeutic 111, 140, 245
  topical 2, 69, 199, 245, 260
apprehension 36
Argentina 66, 127, 272
aristocracy 276
aristocrats 273
arm(s) 57, 87, 167
arousal
  cortical 226
  sexual 139, 140, 182, 207, 229, 273
arrest(s) 163, 192, 251
  cardiac 1, 22, 27, 36, 39, 44, 57, 92, 93, 95, 97, 98, 109, 122, 137, 147, 152, 155, 163, 173, 179, 190, 193, 196, 199, 207, 244, 248, 258
  respiratory 1, 4, 24, 25, 27, 36, 39, 46, 57, 61, 67, 76, 86, 92, 93, 95, 97, 98, 107, 109, 124, 129, 137, 152, 155, 161, 163, 173, 179, 182, 186, 190, 196, 199, 202, 207, 235, 243, 244, 252, 258, 269, 273
arrhythmia(s) 31, 44, 95, 104, 108, 139, 140, 193, 245
arteries 167
artists 182
aspiration, nasal 69
assault 151
asthma 49, 92, 109, 138-40, 150, 154
asylum 53, 178
asystole 193
ataxia 274
athletes 270
atrophy
  optical 222
  skin 161
attention 194
  span 66, 276
attitude(s) 127, 129, 183, 234
  doctors' 35
Australia 18
autism 201
autopsy 39, 87, 107, 192
availability 234
awareness 27

back 1, 229
backwardness 272
bacteremia 175
bacteria 174
balloons, rubber 39
banknotes 259
barbiturates 24, 35, 72, 90, 91, 93, 116, 122, 131, 137, 169, 174,

191, 224, 228, 251, 273
barter 268
beauty 134
behaviour(s) 32, 69, 99, 100, 129, 169, 229
  aggressive 137
  antisocial 155, 218
  bizarre 162
  compulsive 239
  criminal 155, 244, 261
  destructive 27
  drug-seeking 171
  homosexual 156
  odd 84, 94
  psychopathological 165
  repetitive 239
  sexual 32
  stereotyped 258
  strange 178
  violent 23, 151, 152, 206
beliefs 48
benefit(s) 35, 42, 49, 230
Bengal 52
benzedrine 143
benzocaine 81
benzoylecgonine 60, 63, 64, 67, 157
bestiality 41, 229
betel 52, 53, 73
betrayal 243
beverage(s) 81, 92, 93, 95, 109, 218, 261
bewilderment 84
bhang 53
bias 248
bibliography 216
bile 208
binge(s) 29, 203, 226, 228
  sexual 268
binging 95
bisexual 32
black market 21, 122, 143, 218
Black(s) 72, 75, 175, 218, 251, 273, 277
bleeding 81, 95
  vaginal 1
blindness 13, 212, 222
blood 64, 66, 87, 117, 135, 173, 175, 259
  clotting 167
  concentration 64, 192
  glucose 50
  level(s) 28, 39, 54, 64, 90, 91, 108, 140, 192, 199, 208, 257, 273
    plasma 270
  loss 7
  pressure 1, 26, 38, 44, 46, 56, 57, 61, 63, 65, 66, 87, 92, 95-102, 104, 105, 122, 130, 137, 139-42, 151, 152, 158, 171, 182, 193, 194, 199, 203-6, 211, 213, 243, 261, 270, 276
  -stream 79, 135, 174
  sugar 194
  vessels 56, 76, 81, 135, 203, 258
blues, the 11, 198
body 115, 135, 208, 226
  temperature see temperature, body
  weight see weight
body packer 37, 107, 108
boils 177
Bolivia 3, 39, 70, 88, 115, 127, 132, 141, 201, 240, 243, 261, 272, 276
bondage 133
book 31, 35, 36, 61, 63-6, 83, 97, 98, 100, 102, 103, 136-7, 140, 145, 155, 207, 219, 225, 234, 256
  review 8, 48, 71, 94, 114, 159, 188, 231, 245, 248, 277
boredom 33
bowel(s) 88, 149, 178
boy 200
brain 27, 30, 49, 66, 67, 77, 93, 163, 173, 195, 235, 257
  damage 22, 87, 163, 189, 194, 247
  injury 22
  tissue 64
  tonic 261

brandy 52
breath, shortness 4, 54, 57
breathing 61, 93, 95
breathlessness 79
Britain 18, 21, 28
bronchitis 27
bruxism 99, 100
bugs, cocaine 76, 81, 88, 139, 151, 226, 273
"bull horrors" 206
Bureau of Narcotics 55
bureaucracies 277
bush, coca 42
business 178
  -man 192
buyer 134

cachexia 139
"Cadillac" of drugs 60
caffeine 10, 38, 88, 138, 139, 202
Calcutta 52, 53, 73
California 124
Canada 18, 97, 98, 233
Canadian(s) 21, 47, 126
cannabis 90, 91, 126, 155, 174, 191, 233
carbine 69
carbon monoxide 54
carcinoma 141
cardiac arrest
  see arrest, cardiac
care 140, 177
  intensive
    see intensive care (unit)
  terminal 25
case report(s) 1, 32, 39, 44, 46, 53, 57, 63, 69, 79, 83, 85, 87, 95, 107, 113, 118, 144, 148, 149, 154, 158, 164, 166, 171, 173, 178, 184, 190, 192, 193, 200, 205, 208, 211, 212, 214, 215, 222, 229, 234, 235, 241, 247, 255, 267
cash 268
cat(s) 111, 207
catarrh(s) 84, 178
  snuff 14
catecholamines 25, 56
Catholics 75
"caviar" of drugs 88
cecum 108
cemeteries 129
central nervous system (CNS) 5, 6, 15, 27, 36, 44, 46, 66, 73, 97, 98, 140, 163, 177, 199, 232, 236, 258
  stimulant
    see stimulant, CNS
cesarean section 1
chalk 20
"champagne of drugs" 23, 81, 122
charity 53
cheaters 251
cheerfulness 69, 73, 176
chemistry 41, 223, 231, 258
chemists 224
chest 229, 243
chewer(s), coca 20, 58, 59, 61, 66, 76, 127, 128, 132, 141, 183, 189, 194, 195, 240, 272, 274, 276
  non- 127
chewing, coca
  see coca, chewing
chewing-gum 266
childhood 126
children 16, 32, 40, 66, 127, 132, 144, 272, 276
Chile 243
chills 133, 170, 196
China 73
chloroform 52
cholesterol 58, 59
chromatography, gas 64
chronicity 206
cigarettes 154, 155, 214
circulation 177
cities 75, 76
civilization, Incan 93
class(es) 84, 124, 217, 233, 234, 264, 267, 269, 273
  aristocratic 141

  social 73, 81
  socioeconomic 93
classification, legal 218
clearmindedness 32
clergy 42
clinic, Haight-Ashbury 27
clinicians 169, 255
clot 1
CNS
    see central nervous system
coca 9, 35, 41, 42, 45, 48, 49, 65, 66, 69, 80, 89, 102, 111, 112, 115, 127-9, 133, 138, 146, 147, 149, 153-5, 183, 189, 200, 216, 228, 231, 246, 249, 256, 262, 265, 271, 272
  addiction
      see addiction, coca
  bush
      see bush, coca
  chewer(s)
      see chewer(s)
  chewing 3, 20, 25, 40, 41, 48, 49, 50, 58, 59, 61, 66, 89, 115, 127, 129, 169, 187, 195, 201, 216, 229, 240, 266, 272, 276
    effects
        see effects, coca-chewing
    eradication 20
    etiology
        see etiology, coca-chewing
    long-term 3, 183, 195
  cultivation 20, 41
  distribution 41
  leaf(ves)
      see leaf, coca
  plant
      see plant, coca
  production 41, 201
Coca-Cola 23, 76, 81, 92, 93, 109, 122, 134, 138, 139, 218, 261
cocaine bugs
    see bugs
cocainism 14, 84, 177, 178
cocaism 132
codeine 81
coffee 50, 52, 111
cokespoon 228
cold(s) 68, 142, 199, 255, 261, 276
colic 49, 79
collapse 28
  cardiorespiratory 273
  cardiovascular 76
  circulatory 31
  respiratory
      see arrest, respiratory
Colombia 40, 41, 42, 48, 115, 132, 261, 272
coma 22, 25, 57, 73, 88, 93, 95, 97, 98, 135, 161, 179, 241, 247, 264, 267
combinations, drug
    see drug, combinations
Commission of Enquiry on the Coca Leaf 58, 59
    see also United Nations
community 3, 42, 50, 135, 235
  Black 75
complexion 141
complications
  medical 181
  psychiatric 29, 186
compulsion 93, 155
compulsiveness 170, 186, 207
concentration(s) 170, 179
condom(s), cocaine-filled 46, 88, 158, 192, 247
confidence 135, 137, 159, 168, 203
conflicts, interpersonal 267
confusion 23, 74, 93, 97, 98, 122, 124, 129, 135, 152, 166, 196, 201, 243, 264
congestion 192, 217, 269
conjunctivae 111
Connecticut 131
consciousness 39, 53, 87
  alteration(s) 31, 75, 171

consequences 95, 97, 98, 110, 140, 145, 154, 163, 177, 187, 225, 234
  adverse 42, 161, 248, 263
  deleterious 53
  horrifying 253
  public health 270
constipation 53, 73, 161, 200
consumers 154, 195
consumption
  alcohol 58, 59, 127
  amphetamine 260
  coca 41, 195, 276
  cocaine 1, 18, 73, 81, 112, 157, 159, 168, 178, 203, 207, 216, 217, 225, 235, 243, 255, 264, 268
    method 28, 55
    oral 259
  drug 104
  opiate 152
contaminants 174
contractions, uterine 1
control(s) 73, 189, 194, 229, 230, 243
  international 70
  quality 93
controversy 66, 89, 124, 187, 195
convalescence 10
convictions 233
convulsion(s) 2, 23, 26, 28-31, 39, 46, 52, 67, 73, 86-8, 90, 91, 93, 95, 102, 109, 117, 122, 129, 135, 147, 151, 154, 155, 163, 171, 178, 179, 182, 190, 196, 197, 199, 202, 207, 230, 232, 242, 244, 248, 258, 273
coordination 67, 163
coping 256, 261, 268
"coquero" 183
cornea 212
cornstarch 202
coryza 178
cost 57, 155, 196, 203, 234, 235, 267
cough 27, 68, 79, 179, 200, 214, 264
  remedy 45
counsellors 114
couples 75
courage 127, 168, 243, 273
couriers 81
cramps 111, 166, 196
crash 29
craving(s) 52, 73, 76, 81, 84, 118, 137, 148, 176, 177, 187, 195, 218, 233, 235, 241, 261
  opium 9
creativity 171
crime(s) 40, 41, 52, 72, 74, 84, 135, 168
criminal(s) 71, 168, 214
crusting 95
crystals 65, 69, 90, 91, 143
cuca 38
cultivation, coca 20
culture(s) 48, 49, 50, 61, 75, 141
curare 274
cure(s) 11, 78, 118, 134, 182, 188, 198, 219, 241
curiosity 17, 191, 256
curse 229
custom 3, 70
Customs 39, 73
cyanosis 46, 52, 86, 179, 273

damage 148, 236
  brain
    see brain, damage
  CNS 173
  eye
    see eye, damage
  liver
    see liver, damage
  lung
    see lung, damage
  moral 178
  nasal 93, 137
  neurological 202
damiana 68
danger(s) 13, 28, 86, 113, 137, 138, 183, 212,

254, 263
deafness 53
dealers 81, 202
death(s) 4, 24-6, 28, 31, 36, 37, 39, 46, 52, 61, 67, 74, 76, 81, 86-8, 92, 93, 95, 97, 98, 102, 107-9, 117, 124, 129, 135, 137, 140, 149, 152, 161, 173, 177-9, 181, 190, 192, 196, 199, 201-3, 207, 210, 218, 230, 234, 235, 242, 243, 252, 258, 261, 264, 266, 269, 273, 277
debauches 73
debilitation 87, 186
debts 155
deceitfulness 178
defeat 243
defects 40
Defence of the Realm Act 28
deficiency, pseudocholinesterase 95
degeneration
  CNS 236
  moral 49, 272
Delhi 73
delirium 25, 31, 37, 74, 107, 108, 113, 129, 196, 225, 227, 273, 274
delusion(s) 12, 31, 53, 76, 90, 91, 137, 141, 151, 152, 154, 169, 170, 178, 195, 218, 243
  of grandeur (grandiose) 87, 135, 161, 206, 272
  paranoid 31, 69, 164, 178, 252, 253, 258
  of persecution 84, 129, 161, 177, 178, 203, 239, 241
dementia, cocaine 74
denervation 76
dependence 216, 235, 268
  alcohol 246
  barbiturate 151
  bromide 151
  coca 42
  cocaine 6, 8, 12, 21, 55, 77, 85, 113, 144, 156, 161, 164, 165, 176, 177, 243, 265
  drug 145, 148, 154, 239
  heroin 235
  meperidine 151
  morphine 78, 151, 188
  opiate 151
  opium 11, 246
  physical 88, 90-3, 109, 122, 137, 152, 163, 182, 234, 243, 273
  problems
    see problems, dependence
  psychic 43, 77, 90, 91, 163, 233, 243
  psychological 24, 28, 31, 61, 69, 92, 93, 99, 100, 137, 182, 205, 234, 235, 267
  psychotic 23
  synthetic analgesic 151
dependency 137, 227, 233
depravity, moral 52
depressant(s)
    see drug(s), depressant
depression 23, 26, 29, 31, 43, 45, 49, 53, 66, 67, 73, 75, 76, 90-3, 97, 98, 101, 111, 118, 122, 129, 133, 135, 137, 139, 150, 155, 161, 163, 164, 169, 171, 178, 182, 186, 198, 199, 203, 205, 234, 235, 239, 243, 256, 261, 263, 267, 268
  circulatory 86
  CNS 252, 274
  respiratory
    see arrest, respiratory
derivatives, cocaine 86
desipramine 118
despair 243
deterioration 89
  mental 273
  moral 78
  physical 20, 78, 273
detoxification 93, 124,

243
dextroamphetamine 96
diagnosis 15, 37, 108, 118, 235
diaphoresis 158
diarrhea 52, 53, 196
diazepam 27, 39, 46, 60, 109, 122, 125, 158, 170, 210, 234
diet 50, 174, 194, 195, 272
digestion 68, 177, 265
digitalis 237
disappointment 243
discoloration 255
discomfort(s) 84, 235, 276
disease(s) 10, 35, 45, 110, 129, 138, 146, 178, 184, 195, 255
disgust 238
dishonesty 214
disinhibition 32
disorder(s) 33, 113
  affective 207
  digestive 134
  g.i. (gastrointestinal) 177
  manic-depressive 33
  mental 127, 162, 235
  neuropathological 17
  physical 40
  psychiatric 194
  stomach 138
  thought 201
disorientation 225, 247
dissipation 73
distress 35, 55
distribution
  cocaine 92, 93, 95, 182
    body 208
disturbance(s) 148
  cardiovascular 7
  g.i. (gastrointestinal) 150
  nervous 11
  personality 66
  psychopathological 69
  sleep 207
dizziness 23, 46, 53, 73, 86, 124, 243
doctor(s) 9, 12, 21, 44, 45, 55, 62, 74, 78, 85, 117, 126, 138, 146, 147, 179
documentation 135, 239
dogs 66, 169
dollar(s) 88
  bill 140, 234
dopamine 27, 36
dosage 67, 176, 227
dose(s) 6, 7, 31, 32, 35, 52, 53, 63-5, 69, 70, 73, 74, 78, 81, 84, 92, 95, 99, 100, 105, 106, 140, 145, 148, 150, 154, 161, 164, 171, 177, 179, 180, 182, 186, 205-7, 210, 213, 216, 228, 235, 237, 239, 243, 246, 260, 261, 267, 270
  chronic 92, 226
  daily 189
  escalation 250
  estimated 44
  excessive 113, 135
  fatal 27, 88, 122, 185, 208, 250
  good 198
  heavy 170
  high(er) 13, 31, 44, 46, 61, 66, 67, 69, 92, 101, 102, 104, 106, 109, 113, 129, 137, 152, 169, 193, 204, 206, 207, 216, 226, 235, 258, 273
  increased 93
  increasing 88, 99, 100, 130, 145, 163
  intravenous (i.v.) 97, 98, 244
  large(r) 17, 26, 44, 64, 87, 111, 135, 146, 152, 163, 179, 194, 229
  lethal 24, 36, 90, 91, 93, 109, 111, 113, 117, 124, 140, 152, 157, 186, 193, 213, 258, 269
  low(er) 102, 122, 150, 163, 185, 207, 213
  minimal 86

  moderate 113, 203, 273
  normal 141
  oral 88
  over-
    see overdose
  per session 261
  procaine 106
  repeated 87, 140, 232
  safe 7, 88, 176, 179, 258
    maximum 17, 36, 62, 95, 157, 199, 244, 267
  small 44, 67, 92, 122, 193, 232, 273
  snorted 92
  standard 88
  street 104, 137
  strong 73
  tablespoonful 9
  therapeutic 14, 199, 244
  toxic 67, 113, 157, 163, 201, 250
  wrong 22
drink(s) 239
  soda 84
  soft 76, 182
drinker 262
drinking 127
drowsiness 26, 166
drug(s) 17, 31, 33, 36, 47, 49, 53, 54, 60, 61, 63, 69, 71, 75, 83, 92, 93, 95, 97, 98, 101, 103, 104, 107, 123, 130, 134, 137, 140, 152, 157, 160, 163, 173, 176, 179, 192, 208, 215, 216, 224, 225, 228, 230, 233, 241, 250, 252, 257, 260, 263, 270, 273
  (of) abuse 24, 48, 67, 72, 96-8, 106, 129, 136, 139, 140, 217, 224, 234, 252, 257, 261
  abuser(s) 67, 85, 150, 157, 182
  addiction
    see addiction, drug
  addictive 274
  adulterated 266
  attractive 74
  available 267
  benign 264
  (of) choice 105, 139, 228
  combinations 60, 237, 267
  concealing 192
  consumption
    see consumption, drug
  dangerous 29, 84, 140, 177, 182, 185, 218, 221
  dependence
    see dependence, drug
  depressant 90, 91, 169, 218
  effects
    see effects, drug
  expensive 214, 261, 266
  fascinating 177
  fiends 214
  -free 47, 169
  glamorous 203, 261
  habit
    see habit, drug
  habituating 85
  harmful 270
  harmless 235, 267, 269
  illegal 122
  illicit 26, 35, 191, 216, 277
  innocuous 269
  magical 92
  mysterious 261
  narcotic 70
  overdose
    see overdose
  popular 93, 106, 257, 258, 261
  of preference 73
  programmes 235
  psychotropic 87
  purified 27
  purity 150
  recreational 24, 28, 60, 88, 97, 98, 124, 139, 143, 161, 207, 243, 264, 266, 269
  rich man's 120
  seductive 177

  sinister 131
  status 75
  stimulant 104, 169
  street 35, 184, 244, 253, 261
  substitution 165
  synthetic 19
  taking 48
  trafficking
    see trafficking, drug
  use
    see use, drug
  user
    see user, drug
  wonder- 49, 138
drunkenness 74, 129
DSM-III 118
dullness 141
dynamometer 112
dysfunction
  hepatic 174, 177
  sexual 229
dysmenorrhea 53
dyspepsia 53, 73
dysphoria 29, 31, 118, 124, 154, 155, 206, 227, 260, 261
dysrhythmias 171, 199
dyspnea 52, 177

ear(s) 25, 53, 73, 199
Ear, Nose and Throat
  see ENT
eaters, cocaine 73
ecgnonine 61, 66, 154
economics 201
economy 49
ecstasy 151, 152
ectopy 27
Ecuador 115, 127, 261
eczema 161
edema
  cerebral 37, 173, 193
  pulmonary 37, 173, 192, 269, 273
    fatal 4
education 126, 129, 155, 195
educators 74
EEG
  see electroencephalogram
effect(s) 81, 87, 154, 155
  adverse 260
  amphetamine 43, 104, 118
  anesthetic 179
  coca-(chewing) 20, 50, 58, 59, 61, 66, 70, 89, 128, 141, 142, 231, 272, 276
    adverse 201
    beneficial 89
    harmful 66, 109
    subtle 266
  cocaine 11, 12, 26, 31, 35, 38, 43, 44, 46, 53, 56, 57, 60, 63, 84, 101, 104, 111, 114, 135, 137, 145, 166, 177, 178, 188, 204, 205, 207, 208, 230, 234, 239, 248, 258, 259, 270, 277
    acute 203, 213, 228, 243
    adverse 12, 16, 20, 23, 27, 29, 35, 54, 62, 90, 91, 93, 113, 135, 136, 150, 186, 190, 192, 207, 212, 228, 234, 242, 252, 261, 264, 273
    after- 206
    anesthetic 41
    aphrodisiac 73
    behavioural 96, 99, 100, 102, 169, 207, 232, 273
    beneficial 109
    benign 270
    cardiopressor 210
    cardiorespiratory 87
    cardiovascular 56, 65, 96, 99, 100, 104, 106, 273
    chronic 228
    clinical 130, 161
    CNS 5, 65, 97, 98, 163, 247
    convulsive 87, 232
    dangerous 216
    demoralizing 53
    desirable 60, 225

disastrous 52
disinhibitory 41
documented 171
duration 213
electroencephalographic 6
euphoric 49, 73, 88
exhilarating 143, 182
favourable 176, 268
frequent 139
harmful 28, 53, 137
health
    see health, effects
hemodynamic 56
hepatotoxic 174
long-term 228
mental 161
moderate 207
negative 12, 20, 76, 145, 169, 176, 186, 207, 218, 228, 235, 274
peak 261
pharmacological 95, 270
physical 92, 111, 145, 161, 243
physiological 3, 45, 64, 96, 99, 100, 205, 213, 243
pleasurable 32, 67, 93, 151, 152, 192
positive 99, 100, 207, 228
powerful 134
psychic 90, 91
psychoactive 171, 260
psychological 205, 243, 260, 261, 270
on respiration 99, 100
severe 207, 213
side- 7, 13, 17, 27, 30, 147, 170, 199, 228, 252, 256
significant 213
street 196
stimulant 67, 73, 90, 91, 109, 137, 143, 149, 150, 182, 207
stimulating 198
subjective 96, 99, 100, 105, 106, 112, 151, 169, 213, 243, 259
systemic 63, 213
toxic 56, 86, 111, 113, 157, 173, 213, 244
undesirable 163
well-documented 140
drug 103, 207, 216, 239
heroin 81
lidocaine 260
LSD 81
morphine 17
stimulant 116
synergistic 179
effectiveness, cocaine 259
ego 84, 243
Egypt 19
ejaculation 76, 156, 268
EKG 99, 100, 104, 158
elation 178
electricity 68, 235
electrocardiogram (EKG)
    see EKG
electroencephalogram (EEG) 5, 65, 102, 204
elegance 74
elite 139
elixir 139
emaciation 12, 43, 133, 152, 177, 178, 273
emboli 184, 202
emergency 36, 46, 107, 140, 167, 173, 181, 247, 264, 269
  medicine 27
emesis 31, 46, 88
emotion(s) 41, 135, 178
endocarditis 186
endophthalmitis 175, 184
endurance 142, 244
enema(s) 107, 158
energy 12, 27, 41, 49, 50, 53, 61, 73, 93, 99, 100, 127, 140, 149, 164, 188, 203, 207, 228, 248, 259, 265, 270, 274
  sexual 268
engineer 32
ENT (Ear, Nose and Throat) 62, 138

entertainers 87
enthusiasm 41
environment 20, 73, 78, 124, 154
  Andean 3
  high-altitude 50
epidemic 47, 154, 264
epidemiology 121
epilepsy 73, 127, 194, 195
epinephrine 56, 86, 179, 237, 242, 254
epistaxis 214
eradication
  coca-chewing
    see coca, chewing
erection 69, 229
ergot 274
Erythroxylon coca 10, 11, 31, 41, 45, 49, 50, 61, 67, 68, 70, 73, 76, 87, 88, 93, 111, 124, 133, 139, 141, 149, 150, 157, 182, 193, 194, 199, 200, 224, 225, 238, 243, 244, 262, 274
esterases 67
ether 52
etiology
  coca-chewing 50
euphoria 12, 26, 27, 31, 36, 41-3, 50, 52, 53, 55, 57, 61, 63, 64, 66, 74, 76, 81, 87, 92, 93, 95, 102, 109, 111, 112, 124, 129, 130, 134, 135, 137, 139, 140, 150, 154, 155, 161, 163, 171, 182, 199, 205-7, 211, 219, 225, 227, 228, 235, 239, 243, 244, 247, 248, 252, 256-61, 270, 272, 274
euphoriant 35, 261
Europe(ans) 19, 41, 49, 52, 92, 134, 138, 139, 216, 231, 266, 273
evil(s) 41, 53, 272
evolution 109
  social 8
examination(s) 117, 222
  medical 46, 58, 59, 69, 73, 107, 220
  neurological 87
  physical 107, 214, 228
  post-mortem 52
excess, sexual 261
excitation 31, 74, 199, 206, 229
excitement 2, 16, 25, 27, 36, 73, 88, 90, 91, 95, 97, 98, 124, 150, 163, 173, 178, 182, 244, 270
excretion 124, 125, 180, 197
exercise 142
exertion 112, 203, 270
exhaustion 52, 84, 87, 149, 169, 227, 264
  brain 49
exhilaration 12, 68, 93, 134, 135, 176-8, 219, 225, 270
experiment(s) 50, 63, 64, 102-4, 112, 129, 142, 188, 207, 213, 216, 250, 257, 260
experimentation 75, 225
experts 113, 203, 243, 277
exposure, repeated 261
extract, coca(ine) 9, 65, 68, 89, 133, 138, 198, 200, 238, 246, 262
extraction(s)
  cocaine 186, 261
  dental 18
extremities 46, 99, 100, 117
eye(s) 73, 84, 86, 112, 175, 179, 183, 199, 211, 212, 220, 222, 226, 274
  damage 212
  -lids 143
  - sight 166, 222

face 99, 100
factories 73
failure
  cardiac
    see arrest, cardiac
  respiratory
    see arrest,

respiratory
fainting 52, 179, 243, 245, 273
fame, cocaine 93
family(ies) 53, 73, 149, 261
fantasies 69
fatality(ies) 2, 28, 39, 52, 86, 95, 97, 98, 109, 117, 171, 179, 182, 186, 192, 196, 208, 237, 244, 273
fatigue 3, 10, 20, 31, 38, 49, 50, 61, 66, 68, 70, 73, 81, 84, 87-91, 93, 95, 101, 111, 138, 139, 141, 142, 151, 169, 176, 177, 182, 195, 199, 219, 228, 247, 276
fear 113, 135, 168, 206
feces 111, 226
feeling(s) 31, 41, 48, 49, 61, 81, 90, 91, 99, 100, 127, 129, 132, 144, 178, 201, 203, 206, 225, 229, 235, 243, 261, 273, 276
feet 166, 211
femininity 229
fever 29, 57, 170, 177, 200
  hay-
    see hay fever
fibrillation, ventricular 26, 193
fiends 114, 214
film, radio 37
finger(s) 53, 73, 166, 255
fit 53
fitness 266
flavour 38
Florida 28, 269
flour 202
follow-up 47, 126, 140
folly 53
food 38, 41, 49, 61, 68, 81, 111, 132, 198, 239, 244
Food and Drug Act 122
forehead 53
formication 92, 152, 199, 206
France 19
freebase 27, 64, 65, 88, 109, 229, 261
  i.v. 4
  smoking 140, 227, 228, 255
freebasers 203
freebasing 54, 124, 150, 186, 203, 227, 243, 244, 270
French 161
frenzy 41
friendliness 99, 100
friends 178
frigidity 144
frog(s) 143, 230
frustration(s) 70, 256
fun 191
function(s) 73, 167
  brain 195
  cardiovascular 64
  heart 97, 98, 142
  liver 174
  lung 142
  pulmonary 54
  vasomotor 177

gait 222
  staggering 14, 52, 178, 183
ganja 53
garbage 226
gas 54
gasoline 226
gastritis 141
genetics 206
genitals 69, 122, 229
genus, botanical 93
German 116, 161
gesticulations 74
ghetto 93
gift 266
glamour 229
gloom 52, 84
gluconeogenesis 50
glucose 61, 180
  blood
    see blood, glucose
gonorrhea 219
government 41, 42, 134, 195, 216

granuloma(s) 79, 184
gratification 273
Great Britain
  see Britain
Greece 19
guidance 73
gums 111, 235, 265, 267
gynephobia 68

habit(s) 69, 76, 78, 240, 246, 254, 267
  alcohol 115, 246
  amphetamine 164
  coca 40-2, 50, 51, 66, 70, 115, 127, 132, 141, 154, 187, 189, 194, 195, 201, 272, 276
  cocaine 12, 15, 20, 32, 33, 45, 52, 53, 55, 73, 74, 145, 148, 241, 273
    formation 12, 35, 74, 78
  dangerous 276
  debilitating 138
  drug 14, 48, 126, 144, 239, 255
  eating 137
  expensive 270
  filthy 70
  morphine 17, 78, 80
  opium 9, 68, 80, 133, 146, 198, 246, 249
  pernicious 53, 198
  sleeping 137
  work 58, 59
habituation 35, 177, 178, 216
habitués 152, 163, 177
Haight-Ashbury Clinic 27, 124, 125, 234
half-life 185
halitosis 66
hallucination(s) 12, 17, 31, 32, 52, 53, 57, 69, 73, 74, 76, 87, 90, 91, 95, 129, 140, 144, 152, 161, 170, 177, 182, 195, 199, 218, 225, 226, 229, 234, 241, 250, 252, 253, 264, 273, 277
  auditory (aural) 31, 69, 90-3, 116, 129, 152, 155, 164, 171, 178, 186, 201, 206, 226, 235, 239, 243, 258, 261, 267, 272
  gustatory 171, 226
  olfactory 92, 155, 171, 206, 226
  pseudo- 141
  psychotic 31
  tactile 15, 69, 81, 88, 90-3, 116, 129, 137, 154, 155, 164, 171, 186, 203, 226, 243, 258, 261, 273
  visual 14, 69, 90-3, 116, 129, 152, 154, 155, 162, 164, 171, 178, 186, 201, 203, 206, 226, 234, 235, 239, 243, 258, 261, 267, 272
hallucinogen(s) 90, 91, 191, 224, 228, 233, 239
hallucinosis 155
hand(s) 112, 166, 167, 211, 213, 255
  tremor 14
happiness 110
harm 270
harmfulness 145, 176
Harrison (Narcotic Tax) Act 93, 95, 214, 261
hashish 144
hay fever 178, 219
hazard(s) 2, 97, 98, 157, 171, 184
  fire 244
head 53, 166, 220
headache(s) 1, 12, 52, 53, 88, 134, 135, 150, 170, 171, 173, 211, 264
health 58, 59, 97, 98, 102, 118, 132, 138, 146, 154, 155, 195, 241, 265, 270, 276
  centre(s) 42, 46
  effects 20, 42, 84, 128, 218, 261

hearing 52
hearsay 63
heart 41, 44, 46, 53, 56, 97, 98, 117, 137, 178, 179, 184, 186, 193, 273
  beat 95
    rapid 17, 32, 44, 197
  palpitations see palpitations
  rate(s) 44, 56, 63, 65, 76, 81, 87, 92, 95, 96, 99-106, 109, 122, 130, 135, 137, 139, 140, 141, 161, 171, 178, 193, 203, 213, 243, 244, 261, 270
  trouble 12
heaven 266
height 58, 59
hematocrit 58, 59
hemoglobin 58, 59
hemorrhage 171, 192, 220
hemp 19
hepatitis 186, 268
hepatomegaly 58, 59, 141
heredity 74
heroin 19, 21, 23, 24, 29, 30, 57, 60, 72, 81, 90-3, 97, 98, 126, 131, 134, 151, 168, 182, 184, 192, 202, 233, 234, 251, 267, 273, 274
  addict
    see addict, heroin
  users
    see users, heroin
heterosexuals 156
high(s) 64, 75, 76, 81-3, 93, 102, 104, 109, 137, 182, 196, 199, 206, 213, 257, 259, 260, 266
high school 233
hilarity 53
Hindu(s) 52, 73
historians 277
history(ies) 7, 8, 25, 28, 31, 48, 57, 92, 110, 163, 164, 220, 231, 253
  case 114
  of coca 201, 216, 265
  of cocaine (use) 64, 73, 87, 95, 97, 98, 106, 114, 121, 122, 147, 161, 182, 213, 223, 248, 258, 259, 261, 265, 274, 277
  (of) drug ((ab)use) 72, 74, 96, 227, 251, 266
  family 190
  medical 97, 98
  of mental disorder 127
  patient 37, 58, 59
  sexual 144
hit 196
Holmes, Sherlock
  see Sherlock Holmes
homeostasis 61
homicide(s) 73, 74, 84, 92, 95, 139, 178, 272
homosexual(s) 32, 144, 156
homosexuality 41, 114, 144, 156, 229
  pseudo- 156
hookworm 58, 59
hospital(s) 1, 39, 44, 47, 52, 69, 87, 107, 126, 129, 158, 162, 173, 214, 220
  Montreal 14
hospitalization 128, 196, 234, 261
hostility 207
hotline 264
housing 41
hunger 3, 20, 35, 41-3, 50, 61, 68, 70, 89-91, 93, 111, 127, 132, 138, 142, 151, 182, 195, 199, 201, 219, 261, 272, 276
hydrochlorate
  cocaine 12, 117, 166
hydrochloride 124
  cocaine 6, 64, 65, 69, 109, 143, 155, 195, 208, 229, 260, 261, 270
  desipramine 118
  procaine 86, 242
hydrolysis 61, 67
hygiene 58, 59, 124, 178, 276
hyperactivity 109, 169, 197, 203, 206, 207, 227

hyperexcitability 129, 161, 228
hyperpnea 35
hyperpyrexia 26
hyperreflexia 25, 122, 129, 196, 244
hypersensitivity 31
hypersexuality 239
hyperstimulation 76, 177
hypertension 1, 27, 29, 36, 57, 88, 107, 124, 140, 152, 184, 196, 197, 210, 211, 229, 261
hyperthermia 27, 35, 46, 57, 107, 122, 124, 125, 129, 139, 140, 190, 193, 197, 258
hyperventilation 135, 267
hypoglycemia 61, 231
hypotension 158
hypoxia 124
hysteria 68

ice 125
iconography 229
ideation, suicidal 264
illiteracy 182
illness(es) 58, 59, 128, 200, 206, 261
  acute 10
  systemic 255
image 28
immorality 89
impairment 177, 194, 276
  mental 141, 178
import(ation) 73, 75
impotence 17, 45, 53, 56, 144, 154, 156, 161, 177, 178, 229
impulses 168
  suicidal 29
impurities 154
Inca(s) 28, 49, 76, 141, 147,216, 266
income(s) 154, 233, 235
incontinence 178, 190
incoordination 230, 244, 274
indecision 178
India 52, 73
Indian(s), South America(n) 12, 20, 40, 41, 45, 48, 50, 68, 70, 90-2, 95, 109, 115, 139, 141, 142, 169, 189, 199, 201, 231, 265
indigestion 93, 109, 113, 139, 150, 182
infant 1
infection(s) 29, 30, 92, 122, 124, 175, 186, 212
inferiority 41
infestation, hookworm 58, 59
inflammation 173, 175, 186, 215
influenza 68
ingestion 124, 141, 239, 244, 247
  nasal 269
  oral 88, 93, 269
inhalation 57, 76, 102, 104, 122, 129, 162, 186, 207, 229, 235, 259, 261, 270
inhibitor 83
injection(s) 76, 93, 102, 104, 113, 124, 134, 167, 180, 192, 216, 230, 270
  hypodermic 52, 143
  intranasal 139, 244
  i.v. (intravenous) 1, 4, 29, 69, 81, 87, 90-2, 101, 103, 126, 137, 139, 151, 152, 161, 167, 174, 182, 184, 186, 190, 199, 202, 211, 229, 235, 243, 244, 267, 269
  s.c. (subcutaneous) 148, 161, 177, 179, 242
  submucosal 242
injury 135, 167
insanity 141
  moral 17
insects 73, 129, 154, 206, 226, 273
insecurity 168
insensibility 52
insomnia 14, 15, 31, 32, 52, 53, 73, 76, 90, 91, 102, 109, 113, 129,

133, 135, 148, 154, 155, 163, 170, 176-8, 182, 186, 203, 207, 227, 229, 234, 235, 241, 243, 248, 250, 261, 263, 268, 277
intellect 198
intelligence 40, 53, 194, 272
  quotient(s) (IQ) 66, 272, 276
intensive care (unit) 4, 46, 193
interaction(s) 77, 182
  cocaine and other drugs 36, 38
  homosexual 144
  social 50, 189, 266
intercourse, sexual 75, 156, 229
intervention 124, 165, 177, 247
  pharmacological 118
interviews 58, 59, 228, 263, 264
intestine 107
intoxicant 173
intoxication 73, 155
  coca 43, 154
  cocaine 15, 37, 46, 53, 107, 108, 111, 139, 152, 161, 193, 225
    acute 31, 87, 161
    chronic 31, 161, 236
introversion 141
intubation 147
IQ
  see intelligence, quotients
iridoplegia 222
irrationality 69, 124
irregularities, sexual 250
irritability 29, 49, 73, 93, 135, 137, 143, 150, 155, 186, 218, 228, 241, 263, 267
irritants 212
irritation(s) 199
  nasal 95
  spinal 12
isolation 78
Italy 19
itching 129, 226, 243

jails 129
Jamaica dogwood 68
Japan 19
jaundice 177
jazz, musicians 93
jealousy 69, 155, 178
job 145
  loss 261
joy 17

khat 90, 91
kidney(s) 66, 117, 177, 180, 208
kindling 232
kinship 127
knowledge 129

lability 129
  affective 31
laboratory(ies) 134, 235
labour 1, 273
  Indian 41, 42
  manual 89
  physical 111
labourers 189, 194
lacrimation 206
La Dama Blanca 122
landowners 48
La Paz 31
larynx 86, 147, 199, 214
lassitude 74, 135, 137
laudanum 133, 146
laughter 152
law(s) 81, 182, 265, 269, 270
  Canadian 21
  suit 22
laxatives 107, 158
laymen 277
laypersons 234
laziness 127, 264, 272
l-DOPA 5
leaf(ves)
  betel
    see betel
  coca 3, 20, 28, 31, 41, 42, 49, 50, 61, 65-8,

70, 73, 76, 81, 89-93, 109, 111, 124, 132, 138, 141, 142, 147, 150, 163, 169, 182, 187, 189, 194, 195, 199, 201, 216, 225, 226, 229, 235, 238, 240, 261, 265, 266, 272-6
League of Nations 18
learning 169, 189
leg(s) 57, 80, 166
legislation 42, 132
lesbianism 144
lesions 51, 79, 90, 91
lethargy 218
leucorrhea 45
libido 156
lidocaine 109, 150, 196, 260
life-styles 75
light 222, 226
lightheadedness 259
lightheartedness 111
lignocaine 147
Lima 154, 155
lime 3, 93, 141
lips 53, 66, 73, 111, 178, 183, 229
literacy 189, 194
literature 17, 42, 63, 89, 116, 182, 216, 239
lithium 82, 83, 118, 172
liver 53, 64, 66, 86, 93, 117, 133, 173, 174, 177, 184, 195, 208
  damage 92, 174
London (England) 21
loneliness 42
longevity 45, 265
loquaciousness 178
Los Angeles 60, 97, 98, 192
love 27
lover 268
LSD (lysergic acid diethylamide) 67, 81, 116, 233, 274
lunatics 246
lung(s) 22, 45, 46, 79, 117, 184, 186, 192, 269, 273
  damage 29, 54
  "frozen" 92
lysergic acid diethylamide
  see LSD

Malaya 49
malnourishment 61, 115, 201, 272
malnutrition 41, 58, 59, 87, 132, 152, 182, 276
Mama Coca 229
man(men) 4, 40, 41, 44, 46, 53, 54, 57, 67, 69, 76, 90, 91, 100, 107, 110, 127, 133, 144, 148, 154, 156, 157, 162, 170, 190, 191, 195, 201, 215, 225, 239, 247, 261
mania 31, 52, 53, 84, 162, 178
mannitol 202
marihuana 69, 131, 154, 155, 268, 273
market 139
  black
    see black market
  illicit 122
marriages 273
masochism 144
massage 149, 268
masseuses 268
mastication, coca 50, 51, 66, 70, 132, 142, 266, 276
masturbation 144, 156, 268
mechanic 255
media 181
medication 83, 118, 167, 170
medicine(s) 36, 49, 61, 76, 97, 98, 138, 139, 143, 238, 274
  patent 92, 93
megalomania 272
melancholy 113, 206
membrane(s) 269
  mucous 2, 7, 81, 88, 93, 113, 135, 163, 169, 203, 214, 235, 243, 267

memory 109, 178, 189, 194, 264
  changes 31
  loss 12, 53
men
  see man
menace 92, 218
meninges 117
mentation 88
metabolism 41, 61, 66, 67, 142, 157, 161
methadone 126
  maintenance 72, 182, 251
methanol 154
methaqualone 268
methedrine 224
methyldopa 36
methylphenidate 85, 164, 165, 184
Miami 46, 75, 76
migraine 38
minority 261, 270, 277
misery 42, 115, 164, 189, 272
MMPI 145
moderation 270
modification, behavioural 118
Mohammedans 73
money 40, 53, 145, 228, 264, 270
monkey(s) 5, 102
  Rhesus 6
monopoly, coca 20
Montreal 14
mood(s) 32, 33, 61, 103, 111, 112, 118, 137, 204, 205, 206, 207, 228, 239, 241, 265, 268, 273
moodiness 32, 245
morals 73
morbidity 181
morphine 16, 17, 19, 28, 43, 60, 74, 78, 80, 90, 91, 97, 98, 113, 133, 144, 148, 151, 156, 208, 222, 250, 274
  addiction see addiction
morphinism 109
mortality 181
motivation(s) 154, 195, 276
motive(s) 191, 196
mouth 41, 52, 53, 129, 141, 179, 211
mucosa(e) 27
  nasal 7, 26, 64, 245, 260
mud, cocaine 86, 179
murder 229
muscle(s) 40, 88, 93, 111, 151, 194, 196, 198
  heart 44
  spasms 95
  tone 31, 135
musician(s) 93, 114
mydriasis 14, 17, 46, 53, 73, 88, 107, 109, 117, 129, 135, 137, 151, 152, 155, 161, 171, 179, 199, 222, 226, 258, 273
myth 63
mythology 261

narcosis 178
narcotic(s) 93, 134, 216, 218, 242
  traffic 19
Narcotic Control Act 233
nasal septum 29, 88, 95, 97, 98, 140, 161, 171, 186, 214, 215, 235, 244, 269
National Institute on Drug Abuse 134, 145, 223
nausea 36, 74, 86, 90, 91, 93, 135, 166, 170, 171, 173, 182, 196, 211, 238, 243, 244
neck 53, 220
needle 167, 173, 192
  tracks 27, 87
neglect, personal 261
neophyte 74
nerve(s) 25, 81, 177
  conduction 67, 81, 84
  olfactory 215
nervousness 31, 163, 176, 177, 178, 211, 225
neuralgia 53
neurasthenia 177, 178

neuro-asthenia 68
neuron(e)s 25, 232
New York (City) 47, 76, 81, 97, 98, 134, 182
newborns 74
nightmares 148
"Ninga" 45
noise 31
noradrenaline 25, 77
norepinephrine 27, 57, 76, 81, 232
normoglycemics 50
North America(ns) 3, 163, 169, 216, 231, 233
nortriptyline 173
nose(s) 7, 17, 25, 36, 53, 55, 74, 86, 122, 137, 161, 179, 196, 199, 203, 214, 248
  bleed(s) 87, 93, 214, 243, 263, 264
nostril(s) 55, 57, 117, 143, 161, 214
nourishment 141
novice 239
Novocain 81
numbness 2, 52, 73-5, 166, 196
nurse 221
nutrition 177, 186, 240
nymphomania 250

obscenities 107
obsessions 272
obstetricians 1
occupation(s) 31, 114
o.d.
  see overdose
odour 38
offenders 132
oil, mineral 62
Ontario 233
operation 56
opiate(s) 37, 67, 191, 224, 228, 268
opium 11, 19, 53, 74, 84, 143, 144, 146, 218, 249, 274
  addiction see addiction, opium
  eater 53, 198
  habit
    see habit, opium
optimism 69, 243
organism 76, 152, 229
organs 73, 117, 184, 192, 201
  genito-urinary 68
orgasm 76, 152, 229
otolaryngologist(s) 35, 55
otolaryngology 163, 237, 242
overdose(s) 7, 22, 28, 29, 36, 37, 46, 57, 65, 76, 92, 95, 122, 124, 125, 137, 140, 150, 152, 163, 173, 176, 182, 186, 192, 196, 197, 199, 207, 211, 227, 234, 235, 244, 252, 267
  anesthetic 22
  opiate 37
overdosing 109
over-prescribing 47
oxygen 54, 109, 137, 142

packer, body
  see body packer
pain(s) 35, 53, 61, 80, 81, 113, 167, 175, 177, 212, 220, 254, 267
  back 1
  chest 229
  -killer 84
  -reliever 35
paleness 155, 167
pallor 17, 36, 86, 117, 154, 161, 177, 178, 211, 273
palpitation(s) 12, 15, 44, 53, 73, 252, 268
palsy 177
panic 154, 243, 264
paralysis 38, 73, 178
  respiratory 87
paranoia 23, 26, 27, 31, 33, 43, 75, 76, 81, 87, 88, 90, 91, 93, 95, 99, 100, 109, 135, 137, 144, 155, 168, 182, 186, 199, 203, 216, 229, 234, 235, 264,

267, 268, 272, 277
paraphernalia 75
parasites, intestinal 58, 59
parents 87
Paris 74, 78
paroxysms 178
parties 75
paste, coca(ine) 31, 65, 69, 153-5, 179, 229, 261
pathology
  behavioural 207
  lung 22
patient(s) 17, 22, 27, 32, 35, 37, 46, 55-7, 64, 68, 72, 78, 80, 85, 86, 107, 113, 118, 122, 131, 145-7, 149, 150, 154-8, 166, 170, 174-7, 179, 181, 182, 185, 197, 198, 210, 212, 214, 222, 234, 238, 241, 247, 249, 251, 255, 262
  debilitated 36
  depressed 130, 137, 204, 205
  elderly 36
  methadone maintenance 251
  nervous 15
  out- 22
  weak 15
  women 12
PCP
  see phencyclidine
peak 75, 87, 102, 157, 199, 257, 259, 261
penalties 134
perception(s) 211, 218, 226
  altered 141, 272
  disturbed 201
  pain 35
perils 178
personality(ies) 66, 124, 135, 152, 172, 186, 206, 228, 261, 276
persons 142, 145, 235, 241, 273
  addicted 276
  divorced 72
  famous 244
  historical 8
  low-class 53
  married 72
  middle-aged 256
  nervous 16
  separated 72
  single 72
  on the street 104
  young 256
perspiration 53
Peru 3, 19, 20, 46, 49, 58, 59, 61, 69, 70, 73, 88, 109, 115, 127, 132, 141, 147, 154, 155, 240, 243, 261, 272, 273, 275, 276
perversions 41, 144, 156
petechiae, serosal 269
pethidine 208
pharmacist 222
pharmacology 8, 64, 65, 67, 121, 181, 223, 247, 248
pharmacy 22
pharynx 214
phencyclidine (PCP) 60, 88
phendimetrazine 173
phenmetrazine 173
phenobarbital 46
phenomenology 243
phenozone 73
phenytoin 46
Philadelphia 214
phthisis 38, 175
physician(s) 7, 12, 17, 32, 35, 45, 49, 55, 74, 79, 84, 86, 92, 118, 133, 148, 149, 157, 162, 164, 170, 176-8, 183, 193, 220, 227, 234, 241, 246, 253
pimps 81
placebo 99, 100, 103, 104, 106, 204
placenta 1
plant, coca 31, 38, 40, 42, 45, 49, 50, 61, 65, 88, 110, 115, 139, 150, 171, 182, 201, 218, 219, 224, 225, 231, 233

plasma 64, 102, 104, 105, 257, 259, 261, 270
pleasure 27, 73, 88, 134, 138, 144, 155, 191, 229, 234, 235, 268
poison(s) 74, 143, 274
poisoning 84, 140, 273
  amphetamine 88
  CNS 258
  cocaine 37, 52, 88, 108, 117, 124, 125, 152, 157, 166, 180, 197, 208
  malarial 80
  phencyclidine 88
police 37, 73, 108, 168, 206
policy 134
politicians 48
politics 8
polydipsia 37, 107
popularity 23, 25, 52, 57, 81, 92, 93, 95, 97, 98, 124, 134, 140, 159, 161, 163, 167, 169, 173, 182, 217, 224, 235, 243, 277
possession 81, 93, 233
  self-
    see self-possession
potassium, nitrate 73
potency 124
potential 81, 176, 205, 253, 273
  abuse 87, 102, 207, 223, 234, 235, 258, 267
  addictive 12, 25, 147, 261
    amphetamine 267
  criminal 214
  destructive 129
  hallucinogenic 31
  therapeutic 35, 49, 87, 93, 113, 258
  tolerance 67
  toxic 147, 161
potentiation 25
poverty 195, 272
power(s) 76, 81, 84, 139, 151, 201, 225, 229, 273
  intellectual 89
  restorative 41
powerfulness 159
practice(s) 50, 54, 70, 167, 171, 189, 254
  addictive 31
  clinical 36, 156
  coca-chewing 89, 127, 132, 182, 194, 195, 261, 272, 274, 276
  deleterious 41
  ENT 62
  homosexual 156
  male 127
  medical 12, 55, 124
  risky 243
  safe 266
predictors 233
pregnancy 1
prescribing, over-
  see over-prescribing
prescription(s) 55, 164, 200
  false 17
  over- 21
  stimulant 85
pressure, blood
  see blood, pressure
prevention 47, 129
price 75, 81, 87, 134, 182, 196, 202, 224, 230, 269
problem(s) 54, 74, 78, 85, 134, 137, 145, 150, 154, 155, 156, 157, 163, 167, 190, 195, 203, 218, 227, 243, 256, 261, 266, 267, 273
  alcohol 233
  behavioural 97, 98
  blood glucose homeostasis 61
  bronchial 84
  cardiovascular 181
  coca 42, 66, 129, 132, 187, 275, 276
  cocaine 66, 73, 129, 165, 197, 244
  dependence 239, 264
  domestic 31
  drug 21, 145, 233, 243
  emotional 97, 98
  gastric 68
  interpersonal 264

  legal 85
  liver 174
  medical 272
  mental 15, 252
  nasal 95, 228
  organic 236
  physical 29, 145, 264
  psychological 92, 264
  public health 118
  respiratory 92
  sexual 201, 229
  social 131, 155, 272
  spinal 12
  vosospastic 255
  visual 141
procaine 86, 106, 150, 196, 202, 224
procedures 274
  chemical 224
  emergency 36, 247, 269
  management 95
  surgical 36, 56, 157, 163, 185
  surveillance 251
profession, American medical 11
professional(s) 75, 182, 217, 234, 264, 267, 269
profit(s) 60, 81, 202, 276
profiteering 48
prognosis 177
prohibition 270
propanolol 27, 109, 122, 125, 197, 209-11
prostitutes 73, 81
protein 50
prowess, sexual 41
pseudocholinesterase 95
psychedelics 123, 131
psychiatrist 78
psychopathology 145
psychopharmacology 273
psychosis 23, 26, 31, 65, 69, 81, 85, 87, 92, 93, 95, 109, 124, 137, 148, 152, 154, 155, 161, 162, 169-72, 178, 186, 194, 195, 203, 206, 207, 216, 225, 234, 256, 257, 258, 261, 267
  paranoid 29, 67, 69, 116, 139, 140, 150, 151, 155, 163, 170, 206, 227, 239, 243, 261
psychotherapy 118
public 192, 218, 244, 273, 277
publicity, cocaine 113
pulse 38, 43, 46, 52, 53, 73, 93, 111, 113, 129, 135, 142, 151, 158, 166, 170, 177, 179, 182, 194, 196, 199, 204-6, 211, 227, 243, 259, 267, 276
punishment 76, 132
pupils, dilated 17, 52, 53, 76, 81, 140, 143, 193, 211, 222, 226, 227, 229, 230, 243, 258, 261, 273
purchaser, street 224
Pure Food and Drug Act 93
pushers 81, 182

quack 53
queasiness 211
Quechua 3, 195
questionnaire(s) 102, 104, 128, 131, 191, 216, 228, 233
quinine 202, 212

radiologist 22
races, aboriginal 272
rat(s) 30, 169, 207
rate(s) 264
  absorption 7, 243
  detoxification 243
  excretion 197
  heart
    see heart, rate
  metabolic (metabolism) 137, 157, 161
  respiratory 27, 46, 61, 87, 109, 243, 244, 258, 273, 276
  success 118
ratio(s)
  male/female 97, 98
  therapeutic 124

- weight/height 58, 59

reaction(s) 27, 31, 39, 57, 93, 112, 118, 124, 135, 139, 144, 154, 157, 162, 169, 182, 185, 186, 187, 195, 196, 206, 207, 213, 227, 239
- acute 269
- adverse 36, 95, 137, 181, 227, 235, 277
- allergic 137
- bad 62, 218
- idiosyncratic 113, 152, 242
- increased 261
- psychiatric 26
- psychotic 217
- serious 269
- subjective 260
- task 101
- toxic 7, 26, 36, 102, 164, 179, 197, 199, 211
- unpleasant 243
- untoward 2
- unusual 205

rebellion 33
recidivism 241
recovery 129, 169, 200
recreation 57, 69, 154
rectum 158, 173
reflex(es) 66, 179, 222, 276
reinforcement 106, 109
reinforcer 102, 104, 105
relapse 47
relation(ship(s)) 128, 190, 191, 196, 255
- cause-and-effect 273
- drug 43, 168
- sexual 32
- social 127

relief 41, 42, 53, 84, 89, 154, 254, 267
remedy(ies) 11, 49, 68, 111, 113, 122, 139, 141, 142, 150, 198, 238, 254, 268
reputation, cocaine's 35, 73, 277
research(ers) 35, 47, 48, 61, 63, 89, 127, 128, 144, 161, 177, 182, 188, 203, 216, 223, 226, 230, 235, 258, 261, 264, 267
- lack of 270

reserpine 5, 36, 237
respiration(s) 10, 31, 38, 44, 57, 66, 68, 73, 76, 93, 99, 100, 111, 135, 140-2, 151, 158, 177-9, 182, 199, 204, 205, 211, 213, 252, 259
respiratory depression *see* arrest, respiratory
responsibility 132
rest 111, 239
restlessness 25, 43, 46, 55, 73, 88, 93, 95, 124, 135, 161, 163, 170, 178, 182, 196, 228, 243, 244, 247, 273
restorative 38
retina 184
retinopathy 184
reverse tolerance 6, 139, 140, 206, 232, 261
reward(s) 30, 77
rhinitis 87, 124, 235
rhinoplasty 56
rhinorrhea 215
rhytidectomy 56
rhythm, ventricular 44
risk(s) 35, 140, 145, 157, 165, 211, 227, 231, 242, 270
rite(s) 35, 139
ritual(s) 3, 50, 259
role
- of coca 49, 50, 141, 231
- of cocaine 35, 69, 97, 98, 202

route(s) of administration *see* administration, route(s)
ruin, financial 178
rupees 73
rush 234, 235

sadness 70, 74, 138, 206,

219
safeguards 36
safety 36, 124
sale 73, 81, 84
  illicit 53
salesman 114
saline 102, 104-6
saliva 20, 141
salt 66, 124
salvation 243
San Francisco 27, 268
sanitation 42
satisfaction 49, 68
scan, computed tomographic (CT) 171, 193
scarring 212
scars 152, 161, 167, 255
schizophrenia 17, 69, 92, 122, 161, 186, 206, 239
school 127, 164, 233
science 231
scientists 218
seasickness 219
secobarbital 109
sedation 102, 250
sedatives 60, 72, 252
seductiveness 178
seizure(s) 1, 46, 57, 95, 97, 98, 107, 140, 150, 158, 161, 181, 190, 229, 235, 258, 264, 267
  illicit drug 19, 81
self-administration 35, 104, 134, 234
self-confidence 32, 87, 90, 91, 207, 219, 235
self-control 48, 134, 206, 225, 243, 270
self-esteem 164, 256
self-medication 138
self-possession 78
self-reporting 203
senility 49
sensation(s) 3, 41, 53, 73, 139, 151, 226
  orgasmic 229
  pleasurable 93, 195, 235
  reinforcing 35
  unpleasant 15
sense(s) 111, 198, 206, 215
  of security 236, 241
sensitivity 151, 226, 250, 267
sensitization 90, 91, 135, 161, 207, 258
sensorium, clear 258
septum, nasal
  see nasal septum
serum 157
  level(s) 46, 58, 59, 185
setting 63, 235, 256, 266
sex(es) 47, 58, 59, 102, 177, 207, 213, 239
  drive, diminished 17, 264
sexuality 229, 245
Sherlock Holmes 33
shock 170, 179
shouting 31
shrub, coca 87, 124, 141, 157, 199, 216, 244
shyness 134
side-effects
  see effects, side
sight(s) 52, 226
sinusitis 162, 186
skin 15, 40, 58, 59, 73, 76, 81, 93, 129, 139, 151, 154, 177, 178, 183, 206, 226, 273
  atrophy 161
slavery, to morphine 133
sleep 30, 101, 130, 133, 150, 161, 170, 171, 189, 204, 205, 207, 233 264
sleepiness 29, 111, 130
sleeplessness 12, 206
slush 65
smell 52, 215, 226
smoke 226
smokers 227, 228
  cocaine paste 31, 261
  opium 74
smoking
  coca paste 153-5, 207, 229, 261
  cocaine 19, 54, 134, 137, 150, 203, 227, 235, 243
    paste 31
  freebase

- see freebase, smoking
- smuggler 88, 158
- smuggling 65, 81, 192, 199
- snakes 93
- sniffer(s) 79, 95, 145, 244
- sniffing 55, 79, 87, 134, 143, 161, 163, 182, 186, 199, 215, 265
- snorters 227, 235
- snorting, cocaine 1, 3, 23, 29, 54, 92, 93, 95, 109, 124, 135, 171, 182, 211, 220, 234, 235, 267, 269
- snow 119
- snuff(ing) 90, 91
  - catarrh 14
- sociability 140, 155, 225, 228, 265
- socialization 154
- society(ies) 127, 152, 159, 252, 266, 270
- sociologists 277
- sociology 8
- sodium amytal 180
- sodium bircarbonate 158
- sodium chloride 180
- solution(s) 180, 261, 266
  - cocaine 22, 36, 64, 65, 166, 179, 185
    - /wine 12
- solvents 261
- sophistication, users' 60
- South America(ns) 12, 25, 26, 31, 41, 46, 48, 49, 51, 67, 68, 73, 76, 81, 93, 115, 132, 134, 138, 150, 169, 182, 194, 195, 216, 229, 233, 235, 261, 266, 267, 271, 272, 274
- Spaniards 49, 216, 276
- spasms 151, 255
  - muscular 36, 95
- speaking 32
- speech 52, 57, 141, 166, 211, 229
- speed 135
- speedballing 182
- speediness 196
- sperm 144
- spermatorrhea 45
- spine 36
- spirituality 243
- spleen 177, 133, 208
- splenomegaly 58, 59
- spoon(s) 193, 259
- spray(ing) 62, 147
- stamina 68, 112, 169, 182, 219, 273, 276
  - sexual 243
- starvation 84
- status 28, 150, 173, 228
  - drug 75, 203
  - legal 218
  - marital 31
  - respiratory 57
  - social 233
  - socioeconomic 127
- sterility 229
- stimulant(s) 3, 33, 35, 38, 43, 60, 68, 85, 95, 100, 103, 134, 168, 202, 207, 213, 216, 218, 224, 235, 239, 244, 258, 266
  - CNS 25, 29, 61, 67, 87, 88, 99, 100, 109, 118, 122, 124, 137, 139, 150, 151, 182, 199, 218, 226, 234, 235, 239, 248, 257, 260, 270, 273
  - users
    - see users, stimulant
- stimulation 41, 66, 69, 73, 81, 111, 139, 152, 228, 230, 234
  - CNS 15, 27, 46, 66, 93, 129, 141, 161, 162, 243, 244, 250, 252, 273, 274
  - hyper-
    - see hyperstimulation
  - intellectual 43
  - over- 35, 135, 196, 250
  - sexual 155, 225, 228, 248, 256
- stomach 12, 42, 52, 66, 111, 138, 146, 166, 208, 265
- strength 61, 68, 84, 90, 91, 109, 112, 127, 129,

134, 141, 178, 194, 213, 272
stress(es) 41, 118, 132, 169, 195, 206, 261, 272
stroke 57
strychnine 52
student(s) 79, 182, 233
stupidity 53
stupor 31
sucrose 88
suffering 115, 187, 200, 241
sugar(s) 81, 87, 135
  blood
    see blood, sugar
suicide(s) 73, 74, 95, 97, 98, 139, 154, 155, 178, 229, 244, 264
sulfate 154, 261
supersensitivity 77
supply(ies) 126, 154, 256
  cocaine 25, 32
surgery 25, 36, 95, 112, 138-40, 157, 167, 171, 176, 215, 242, 247, 274
survey(s) 60, 134, 203, 233
suspiciousness 31, 69, 161, 170, 178, 206, 211, 235
swallowing 32
sweat(ing) 122, 135, 151, 152, 161, 177, 178, 200, 211, 243, 273
swelling 255
symptom(s) 1, 27, 37, 46, 52, 53, 61, 73, 74, 107, 141, 145, 151, 155, 161, 166, 170, 199, 210, 227, 255
  overdose 29, 122, 125, 140
  presenting 107
  toxic 86, 151
syncope 13
syndrome(s) 135, 153-5, 206
  abstinence
    see abstinence, syndrome
  toxic 99, 100
  withdrawal
    see withdrawal, syndrome
syphilis 74
syringe 87, 193
system 150, 234
  "British" 126
  cardiovascular 36
  central nervous
    see central nervous system
  circulatory 66, 198
  digestive 201
  limbic 232
  nervous 45, 70, 143, 148, 177, 198, 222, 250
    sympathetic 152

tachyarrhythmias 197
tachycardia 26, 27, 35-7, 46, 56, 66, 86, 88, 97, 98, 107, 129, 152, 155, 158, 196, 199, 210, 211, 213, 261, 273
tachypnea 46, 211
talc 88, 202
  flashes 184
talkativeness 74, 93, 95, 124, 139, 140, 148, 150, 152, 155, 182, 199, 206, 207, 211, 214, 235, 243, 244
taste(s) 38, 196, 226
  coca leaves' 20
tea 38, 111
  -like 141
tearfulness 130, 205
technique 62
  administration 7
  period analysis 5
teeth 52, 53, 109, 117, 196, 214, 265
  -grinding 211
temperament 148
temperature
  body 26, 46, 53, 57, 61, 65, 66, 73, 81, 87, 88, 96, 99, 100, 135, 137, 139, 140, 163, 178, 179, 182, 194, 199, 204, 205, 248,

258, 273
  oral 213
tension 234, 235
test(s) 71, 143, 174, 189, 194, 195, 269
  laboratory 37, 58, 59
  personality 228
  psychological 260
tetracaine 2
theft 157
therapy(ies) 126, 150
thinking 31, 272
"third scourge of mankind" 93, 113, 138
thirst 3, 41, 61, 73, 127, 182, 195, 200, 201, 229
thrill(s) 27, 90, 91, 93, 252
throat(s) 22, 25, 32, 55, 73, 111, 196, 214, 235
  dry 16, 52, 122, 124, 135
thrombosis 167
thyroid 141
tingling 166
tissue(s) 57, 86, 175, 184, 255, 269
  brain
    see brain, tissue
  nasal 235
  wasting 49
titration 35
tobacco 32, 49, 69, 127, 129, 154, 155, 233, 255, 270
toes 255
tolerance 6, 35, 61, 67, 69, 76, 77, 81, 87, 88, 90-2, 103, 122, 135, 151, 152, 161, 163, 169, 182, 207, 239, 243, 250, 258, 261, 265, 273, 277
  reverse
    see reverse tolerance
tongue 41, 49, 53, 73, 141, 173, 214
tonic(s) 41, 45, 68, 95, 109, 122, 218, 261
tonsillitis 32
toothache 117, 127, 134, 138, 231, 241
torpor, gastric 178
toxicity 26, 27, 37, 65, 86, 88, 97, 98, 107, 109, 124, 129, 132, 157, 173, 177, 181, 185, 196, 202, 203, 205, 209-11, 218, 234, 235, 242, 244, 247, 269, 273, 276
toxicology 97, 98, 258
trachea 22
tracheostomy 57
trade
  coca 201
  cocaine 48, 88
  drug 19
traffic, illicit 19, 143
trafficking 218
  drug- 48, 155
tramps 66
tranquillity 68
tranquillizers 93
transmission, synaptic 232
trauma 22, 158, 179
treatment(s) 1, 9, 16, 27, 28, 31, 47, 52, 54, 69, 78, 85, 88, 107, 113, 118, 121, 122, 124-6, 131, 133, 137, 138, 145, 150, 162, 164, 165, 167, 170, 175, 177, 180, 210, 231, 234, 235, 241, 246, 249, 251, 264, 267, 269
  coca 198
  chronic 6
  l-DOPA 5
  lithium 83, 172
  methods 27, 118
  surgical 247
tremor(s) 14, 43, 46, 52, 67, 73, 88, 93, 95, 133, 135, 148, 150, 151, 163, 177, 199, 211, 229, 243, 244, 248, 261, 264, 273
trend(s) 27, 129, 224, 227, 243, 269, 273
trephining 163
tuberculosis 74, 122, 200, 219
twitches 73, 151

U.K.
    see United Kingdom
ulceration 203
ulcers 26, 138, 212, 255
uneasiness 215
uniqueness, cocaine 202
United Kingdom 47
United Nations 20, 58, 59
  Commission of Enquiry on the Coca Leaf 240
United States (of America) 18, 23, 25-7, 39, 46, 55, 73, 75, 76, 81, 84, 87, 88, 93, 95, 97-100, 102, 106, 109, 122, 124, 134, 138-40, 151, 152, 161, 163, 173, 182, 203, 213, 233, 234, 235, 243, 247, 253, 261, 264, 266, 267, 273, 277
unkemptness 154
unrest 178
urethra 179
urge 267
urinalysis 53, 60
urinating 161
urine 52, 63, 72, 87, 111, 125, 173, 178, 180, 190, 193, 197, 208, 226, 251
  volume 12, 111
U.S.(A.)
    see United States (of America)
U.S. Treasury Dept. 55
usage, popular 239
use(s)
  alcohol 32, 137
  amphetamine 43, 93, 236
  anesthetic 179
  coca 48, 154
    long-term 66
  cocaine 1, 15, 29, 33, 36, 43, 52, 53, 75, 81, 84, 93, 95, 106, 112, 116, 131, 144, 148, 156, 162, 181, 192, 202, 207, 218, 220, 221, 228, 233, 235, 248, 255, 256, 261, 264, 266, 267, 268, 270, 277
  acute 96
  cessation 118, 150, 169, 186, 203, 234
  chronic 29, 87, 93, 137, 144, 148, 186, 199, 206, 236, 273
  circumstantial 256
  clinical 65, 139
  compulsive 256, 264
  continued 250
  daily 256
  earlier 122
  excessive 53, 229
  experienced 99, 100
  experimental 256
  extensive 92
  female 95
  first 69
  frequency 182, 270
  frequent 170, 176, 235
  greater 273
  habitual 52
  heavy 92, 203, 222, 235
  illegal (illicit) 140, 212, 216
  indiscriminate 183
  infrequent 270
  intensive 140
  intranasal 29, 87, 263
  intravenous (i.v.) 92, 150, 268
  legitimate 163
  licit 216
  long-term 12, 23, 53, 76, 87, 161, 163, 177, 257, 270
  male 95, 99, 100
  medic(in)al 21, 73, 122, 138, 140, 141, 150, 203, 237, 267
    non- 134, 213
  mud 179
  occasional 140, 191
  oral 259
  persistent 73
  predictors 233
  prescribed 178
  prolonged 169
  recreational 35, 46,

        73, 85, 87, 102, 135, 138, 163, 192, 195, 216, 217, 225, 227, 228, 231, 234, 244, 256, 259, 267, 269
    regular 156, 203, 213, 255
    repeated 90, 91, 139, 151, 152, 156, 235, 243, 250, 258
    splendid 113
    street 150
    therapeutic 35, 45, 95, 138, 191, 231, 273, 274
    topical 2
  codeine 254
  drug 47, 74, 137, 138, 155, 164, 182, 191, 252, 273
  hallucinogens 233
  heroin 131, 202, 233
  LSD 233
  morphine 254
  narcotics 86, 254
  opium 9, 254
  oral 79
  tobacco 32, 127
usefulness, therapeutic 176
user(s) 48, 63, 155
  amphetamine 191
  coca 189, 194
  cocaine 21, 27, 52-5, 60, 71, 72, 75, 76, 87, 90-3, 102, 114, 122, 124, 127, 131, 135, 144, 156, 159, 161, 168, 174, 184, 191, 202, 214, 219, 225, 229, 233, 250
    appearance 124
    casual 28
    characteristic 196
    chronic 23, 40, 53, 76, 118, 124, 177, 243, 268
    compulsive 270
    daily 171
    first-time 163
    frequent 75, 90, 91, 186, 270
    habitual 69, 73, 81, 145, 214, 218, 234, 239
    hard-core 65
    heavy 24, 26, 71, 92, 186, 191, 243
    illicit 224
    infrequent 270
    intranasal 264
    light 24
    long-term 215
    non- 127
    occasional 218
    poor 73
    recreational 65, 73, 92, 95, 137, 145, 150, 199, 225, 226, 265
    regular 15, 150, 243
    rich 73
    street 64, 137, 167, 182, 216, 235, 257
      American 134
    widespread 102
  drug 74, 75, 79, 123, 167, 191, 216
    stereotype 267
  heroin 21, 102, 174, 214
  polydrug 93
  stimulant 104

vagina 235
vaginal spotting 9
Valium 60
value(s) 48, 254, 267
  therapeutic 130, 235
vasoconstriction 26, 36, 88, 93, 97, 98, 199
vasoconstrictor 140, 147
veins 92, 167
Venezuela 129
ventilation 142
vertigo 52, 53, 117, 122, 135, 155, 178, 190
vessels, blood
  see blood, vessels
vice 66, 70, 73, 115, 240
victim(s) 31, 39, 85, 97, 98, 108, 122, 124, 158, 162, 192, 211, 241

vigour 99, 100, 198, 239, 270
violence 12, 43, 87, 95, 122, 124, 168, 178, 182, 216, 235, 243, 253, 261, 264
virtues 265
viscera 52
vision 175, 212, 222
vitality 45, 69, 206
vitamin(s) 20, 41, 61, 141
vocal chords 138
vocalization 13, 74
voices 226
volunteers 96, 101, 103, 104, 106, 207, 213
vomiting 36, 93, 122, 140, 163, 170, 171, 173, 199, 211, 244, 252, 258
vulgarity 74

wages 41
war, on cocaine 270
water 42, 111, 125
weakness 31, 53, 57, 61, 113, 141, 148, 178
  moral 74
weather 255
weekends 255
weight 30, 52, 53, 58, 59, 76, 109, 122, 124, 133, 135, 154, 155, 194, 203, 227, 228, 237, 241, 257, 264, 266
well-being 52, 112, 135, 198, 203, 276
well-to-do 73
West, the 48, 67
Westerners 50
White(s) 72, 75, 83, 87, 97, 98, 107, 162, 234, 235, 255, 263, 264
white-collar 264
willpower 52, 144, 219, 274
wine 12, 75
withdrawal 26, 76-8, 84, 126, 151, 161, 169, 170, 203, 218, 239, 241, 263, 267
  morphine 92
  syndrome 23, 26, 90, 91, 135, 150, 163, 199, 233, 235, 258, 261, 277
woman(women) 1, 12, 14, 22, 40, 53, 54, 69, 73, 75, 76, 113, 117, 127, 133, 144, 149, 171, 180, 190, 193, 195, 200, 205, 212, 220, 229, 239, 250
  fear of 68
  pregnant 1, 74
work 41, 58, 59, 89, 101, 126, 127, 142, 196, 245, 261, 268, 273, 276
worker(s) 127, 192, 201, 235
  metal 255
World Health Organization 233
World War I 17, 73
World War II 73
worm(s) 15, 177
  hook-
    see hookworm
worry 49, 73, 84
wretchedness 41
wrist 167

youth 94, 261

LIBRARY
FEB
5
1986
UNIVERSITY OF TORONTO

5328

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

Z
6663
C63A53
1985
c.1
BMED